DRIVERS OF THE HIV EPIDEMICS IN THE CAPRIVI REGION, NAMIBIA

AGNES MWILIMA

NAMIBIA

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Master of Public Health

By

Agnes Mwilima

Namibia

Declaration:

Where other people's work has been used (either from a printed source, internet or any other source) this has been carefully acknowledged and referenced in accordance with departmental requirements.

The thesis **Drivers of the HIV Epidemics in the Caprivi Region, Namibia** is my own work.

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List of abbreviations

AHFS	Adolescent Health Friendly Services
AIDS	Acquired Immunodeficiency Syndrome
CACOC	Constituency AIDS Coordination Committee
CDC	Centre for Disease Control
COMBI	Communication for Behavioural Change Interventions
HAART	Highly Active Antiretroviral Treatment
HIV	Human Immunodeficiency Syndrome
IEC	Information Education & Communication
KAP	Knowledge, Attitudes and Practice
MDGs	Millennium Development Goals
MET	Ministry of Education and Technology
MFMC	My Future is My Choice
MIB	Ministry of Information and Broadcasting
MTP	Medium Term Plan
MOHSS	Ministry of Health and Social Services
NANASO	Namibian Network of AIDS Service Organisation
NASOMA	Namibia Social Marketing Association
NDHS	Namibia Demographic and Health Survey
NDP	National Development Plan
NPC	National Planning Commission
NYC	National Youth Council
PLHIV	People Living with HIV
PMTCT	Prevention of Mother to Child Transmission
RACOC	Regional AIDS Coordination Committee
RSV	Regional Support Visit
SIAPAC	Social Impact Assessment & Policy Analysis Cooperation
SMA	Social Marketing Association
STIs	Sexually Transmitted Infections

SW	Sex worker
TB	Tuberculosis
TCE	Total Control of the Epidemic
UNAIDS	Joint United Nations Programme on HIV/AIDS
VCT	Voluntary Counselling and Testing
VSO	Volunteer Services Oversee
WHO	World Health Organisation

Glossary

Gini Coefficient	Measures equity of wealth distribution among socioeconomic classes (NPC, 2004a)
Drivers of HIV	Structural and social factors that are not easily measured that increases people's risk and vulnerability to HIV infection (UNAIDS, 2008)
Vulnerability	The social context that affects an individual's ability to protect her/his self from HIV infection (KIT, 2009 Basic HIV Module)
Susceptibility	The probability of someone will contract HIV (KIT, 2009 Basic HIV module)
Structural factors	Are physical, social, cultural, organizational, community, economic, legal or policy aspect of the environment that impede or facilitate the efforts to avoid HIV (UNAIDS, 2008)
Transactional sex	Exchange of sex for money, favors or gifts (MOHSS, 2006)
Wealth Index	Proxy measurement for the standard of living of the household, based on household ownership of consumer goods, dwelling characteristics, type of drinking water source, toilet facilities and other characteristics related to household's socio economic status (MOHSS, 2006)

Executive Summary

Approximately four out of ten people are HIV positive in the Caprivi region compared to the national average of two out of ten. The MOHSS started conducting the HIV sentinel survey in pregnant women in 1992, since that time the region is having the highest HIV prevalence compared to other regions and the national average. What is contributing to this epidemic is not known which makes planning for responses difficult.

The aim of the study is to explore different factors that contribute to the HIV epidemics in the Caprivi region. This was done through literature review, using Eaton's conceptual framework. The framework describes the drivers under personal, proximal and distal factors. Individual and sexual behavioural factors are classified under personal factors while interpersonal, physical and organisational environment are under proximal factor and lastly, the cultural and structural factors are under distal factors.

The study concluded that the drivers of the HIV epidemics in the Caprivi region are complex. There are many gaps in the responses like poor coordination and some drivers are not covered by present response. Those that are covered by the recent programs in the region e.g. project hope[1] and Total Control of the epidemic (TCE)[2] are not yet evaluated. In such a complex situation no general approach will work everywhere and no single approach/intervention will work anywhere. Recommendations related to policy, research and intervention to have been made based on the gaps identified and based on a review of experiences from other settings.

Key words: HIV, AIDS, Africa, Southern Africa, Namibia, Caprivi, Concurrent multiple partnerships, gender, transactional sex, education, poverty, male circumcision, culture, masculinity, MSM and their combination.

Word count: 14,986

[1] Project Hope gives small loans, training on business management and health education including HIV.

[2] TCE is a house to house and face to face HIV counselling project

Introduction

Approximately four out of ten people are HIV positive in the Caprivi region compared to the national average of two out of ten. For more than sixteen years, the region is having the highest HIV prevalence compared to other regions and even higher than the national average. It is good to know the factors that are contributing to this epidemic, in order to plan targeting intervention. The surveillance system in Namibia is only testing pregnant women. Moreover, behaviour and attitudes are not included in the survey and groups at risk like men having sex with men (MSM), sex worker (SW), their clients and prisoners are not included. Currently the drivers of the HIV epidemics in the Caprivi region are not known and interventions are general all over the country amid the HIV prevalence rate. In such a complex situation no general approach will work everywhere and no single approach/intervention will work anywhere.

The HIV rate is not only high in pregnant women, it was also high in the national testing day. This day is held as an intervention to increase access and awareness of VCT services. The findings of the day showed that indicated that Caprivi was had the highest prevalence of HIV amongst all the other regions with 20.4 percent (MOHSS, 2008b).See appendix 6 for national testing day regional results.

Working as a Chief Health Program Administrator for Special programs including HIV and AIDS, in the Caprivi region has made me feel obliged to find out why the region still lags behind the rest of Namibia in responding to HIV. The millennium development goals, vision 2030, Namibia National Development Plan III and the call towards universal access to HIV Prevention Care and Support are both directed at decreasing new HIV infections.

Dr Peter Piot said, "We encourage countries to know their epidemics because we have learnt over the twenty-five years that the epidemic keeps evolving. It is important for countries to take stock of where, among whom and why new HIV infections are occurring. Understanding these unable countries to review, plan, and match and prioritise their responses to meet these needs" (UNAIDS, 2008b).

This stimulated my interest to explore the factors that are influencing the HIV epidemics in the Caprivi region to examine the existing responses critically and to explore how others have responded to such situations. I intend to come up with recommendations for national regional and local levels to better respond to the epidemic.

CHAPTER 1

This chapter presents the background of the country (Namibia) and the Caprivi Region which is going to be discussed in this thesis.

1.1 Background of Namibia

Namibia is one of the countries in Sub Sahara Africa situated along the Atlantic Ocean, in the south western part of Africa. Its neighbours are Angola, Botswana, Zambia, Zimbabwe and South Africa (MOHSS, 2006). The country got independence from South Africa in March 1990. The government is under the majority rule of the SWAPO party with five small opposition parties. The country is divided into 13 administrative regions (MOHSS, 2006).The regions are run by regional governors and constituency councillors who are also tasked to chair the Regional AIDS Coordination Committees and the Constituency AIDS Coordination Committees respectively.

According to the 2001 national census projections, Namibia's population is estimated at 2.1 million with the population density of 2 persons per square kilometre and more women than men. Forty three percent (43%) of its population is younger than 15 and less than 4 percent over 65 years. There are ten ethnic groups with a great cultural and ethnic diversity (NPC, 2004a).

Namibia has been classified as a lower middle income country with 40% of its population living below the poverty line and 37% unemployed (UNDP, 2005). The country has a relatively high per capita income with very unequal distribution of wealth between the poor and the rich, resulting in a Gini co-efficiency of 0.70. The wealth index measure used in the NDHS showed that only 5.0 percent of the population are in the highest wealth quintile while almost 50 percent are in the lowest wealth quintile (MOHSS, 2006).

The Namibian economy relies heavily on exportation of diamonds and other minerals, fishing and tourism industry (MOHSS, 2006a). Many rural households depend on subsistence farming for livelihood. The migration pattern is from rural to urban areas where the industries are.

The Namibia Demographic and Health survey indicates that the education level in both men and women is high. The young people show much higher education compared to the older ones, with urban residents higher than rural residents (MOHSS, 2006)

Namibia is ranked third most HIV affected country globally, after Swaziland and Lesotho. It is estimated that 220 00 Namibians are living with HIV. Young women are more affected accounting for an estimate of 130 000 of the people living with HIV (UNAIDS, 2008). The Directorate of Special

Programs under the MOHSS is coordinating the HIV program. The Directorate is composed of two sectors, the Health Sector which is responsible for health responses and the multisectoral sector for non health HIV matters. There is a national AIDS plan in place from 2004-2009, Medium Term Plan III (MTP III). The goal of the MTP III is to reduce the incidence of HIV infection (MOHSS, 2004).

1.2 The Caprivi Region

The Caprivi region is situated in the far north-eastern part of Namibia with a surface area about 14,528 square kilometres. The region is about 1 300 kilometres from the capital city, Windhoek. It has only one town Katima Mulilo while the nearest town is five hundred kilometres away which is Rundu in the Kavango region (NPC, 2004). It is the only region in Namibia and even in the rest of Africa that borders four countries (Botswana, Zambia, Zimbabwe and Angola). See appendix 1.

The region has a population of 90 444 in 2008 according to the 2001 national census projections and a 5.5 population density per square kilometre. Life expectancy dropped from 53 to 41 years by 2003 (NPC, 2003). Fifty- seven percent of the regions people are likely to die before the age of 40 which is much higher than the national average of 33.5 percent (NPC, 2004b). The region experienced a sharp decline in the population. Only 28 percent of the population is living in urban areas while 72 percent live in rural areas (NPC, 2004a).The region is divided into six constituencies which are lead by politically elected constituency councillors. The regional ministerial offices are in Katima Mulilo which is the only town in the region.

In 2000, the United Nations Development programme classified the region as the poorest in Namibia due to its high human poverty index of 36 compared to the national average of 24.7 (NPC, 2004b).

There are three traditional authorities leading the communities, the Masubia traditional authority in Bukalo, the Mafwe traditional authority in Chinchimani and the Mayeyi traditional authority in Sangwali. These traditional authorities are recognised by the government and are consulted in decision making on the issues concerning the region.

The prevalence rate in the border towns of the neighbouring countries are 45 percent in Victoria Falls in Zimbabwe, 40% in Kasane, Botswana and 30% in Livingstone, Zambia. The Trans Caprivi highway has increased the cross boarder mobility of both people and vehicles making the environment more conducive to sex work. Seasonal floods and drought destroy crops making people rely on food handouts from the government. During the flood season communities assemble in resettlement camps for five to six months. Villages are surrounded by water making it difficult to move from one area to another and making access to basic needs like money and food difficult.

The region has only one hospital (Katima Mulilo hospital) of 250 beds. It is used as a district referral hospital. Referral from clinics in the flooding areas is difficult during the 6 to 7 months of flooding. Ambulances cannot go to these areas. There are three health centres and 25 clinics. The hospital has a separate ART clinic where clients and patients who test HIV positive go for CD4 count and follow up treatment. The clinic was extended twice but still cannot cope with the demand due to a rapid increase in the number of patients and clients enrolled on the program. By March 2009 there were 5 500 on ART treatment (MOHSS, 2008b).

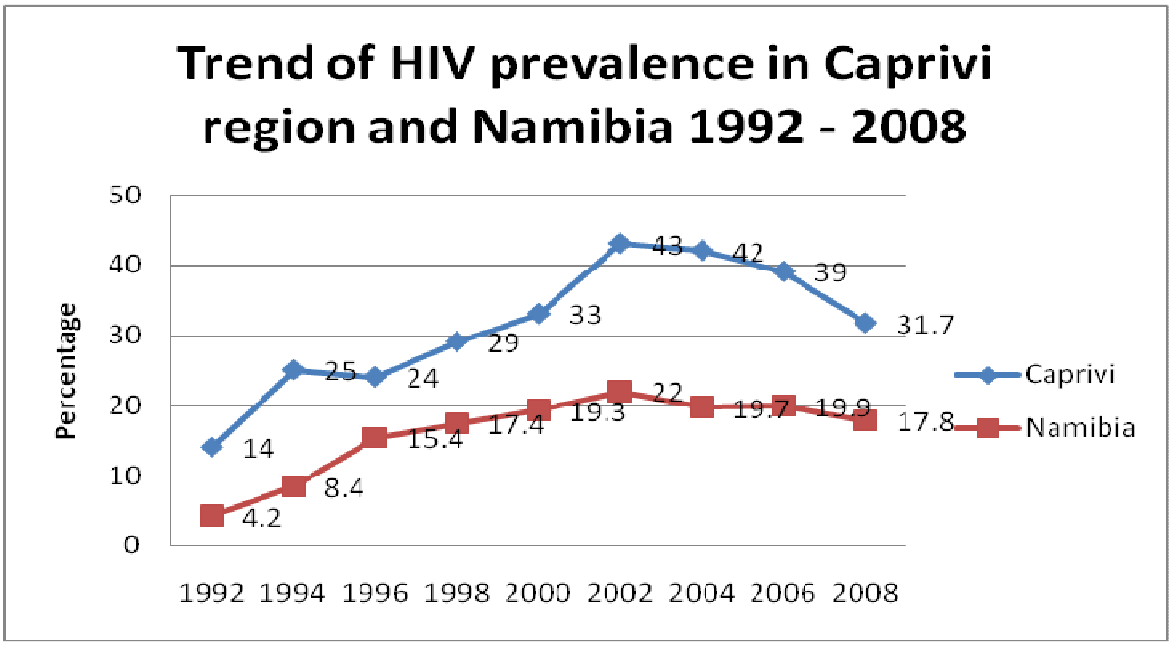
CHAPTER 2

This chapter presents the problem statement, the aim and objectives of the study, justification, limitations and methodology used to search. It will also describe the process of the literature review.

2.1 Statement of the problem

The first AIDS case in Namibia was diagnosed in 1986. Since then, the HIV cases have been increasing in the country. The impact of the epidemic is felt at all levels of society. Since 1992, the Ministry of Health and Social Services is conducting sentinel surveys among pregnant women. As shown in figure 1, the Caprivi regions' HIV prevalence has been higher than the national prevalence (MOHSS, 2008a).

Graph 1



Source, MOHSS, 2008a

According to 2008 HIV sentinel survey, the HIV prevalence in Caprivi is almost twice as high as the national prevalence (MOHSS, 2008a). Women in the age group 30-34 years show the highest prevalence of HIV infection. Appendix 5 shows the prevalence rate according to regions.

The national HIV prevalence survey is only conducted in one group of the population, the ANC attendees. This surveillance system does not generate enough data to understand the prevalence rate in other groups. It does not

include KAP studies. This makes it difficult to understand what drivers of the epidemics in the country and the region in particular.

The VCT data has indicated that VCT clients in the caprivi region are six times more likely to be HIV positive compared to the clients in the capital city (MOHSS, 2009).

Cultural practices like polygamy is socially acceptable in the region. Widow cleansing and wife inheritance is decreasing but was common in the past 15 to 20 years. There is a stronger belief in witchcraft and traditional medicine than in other regions in the country (Thomas, 2007).

HIV and AIDS remain the major health problem in the Caprivi region. The following social problems are common: gender based violence (rape and domestic violence), marital and cohabitation problems, suicide and attempted suicide, substance abuse, and floods. The flood victims need a lot of psychosocial support (MOHSS, 2008b).

Parker and Connelly (2007) indicate that Namibians' knowledge on HIV is on average above 90 percent but there is no significant change in behaviour observed in the survey.

2.2 Justification

This study aims to complement the study which was done on the main behavioural and contextual factors that are currently driving the HIV epidemics in Namibia by Cristina de la Torre et al for the MOHSS in 2009. Their study looked into eight main factors for Namibia as a whole and only three to four factors were discussed as region specific factors. Commercial sex, low levels of condom use, early sexual debut and low frequency of circumcision were discussed for the Caprivi region.

Knowledge about HIV transmission and prevention, multiple partnership, alcohol abuse and increased self reported STI among men were the only factors mentioned. The drivers of the HIV epidemic are complex, therefore, this study is going to search more into general factors and also identify others which are not covered by the De la Torre et al study. This will be done in the context of the Caprivi Region.

As a Chief Health Programme Administrator responsible for HIV/AIDS in the caprivi region, it is important to understand the drivers of the epidemics that have been above the national average for over 16 years. Knowing what is driving the epidemic will give deeper understanding of the HIV epidemics and guide in the development of effective responses.

2.3 Limitations

Factors contributing to HIV epidemics are complex, literature review combined with primary data (interviews and focus group discussions) could have given much insight into the regions drivers of the epidemic. Considering time given for the thesis, one could not go back to Namibia, caprivi region to collect needed data.

2.4 Aim and Objectives

2.4.1 General Objectives

To explore factors that are influencing the HIV epidemic in the Caprivi region, examine the current responses, identify the gaps in these responses and make recommendations to improve these responses based on a review of responses in other settings.

2.4.2 Specific Objectives

2.4.2.1 To identify personal and behavioural factors that shapes the epidemic in the Caprivi Region

2.4.2.2 To determine interpersonal, physical, organisational and environmental factors that might fuel the epidemics in the Caprivi Region

2.4.2.3 To explore how culture and structural factors may contribute to vulnerability of the residents of the Caprivi Region

2.4.2.4 To examine the interaction between personal, proximal and distal factor that contribute to the epidemic in the caprivi region

2.4.2.5 To review the current responses to the epidemic the Caprivi, identify the gaps and to review how these gaps have been addressed in other settings.

2.4.2.6 To develop recommendations on how to improve on the responses to the epidemic.

2.5 Methods

The study is comprised of a literature review. As mentioned in the limitations primary data could not be collected due to limitations in the study duration.

2.5.1 Search Strategy

Search engines such as Google scholar, Pub Med, Medline, Science Direct and Scopus were used in this study. Anecdotal information, grey literature and manual search were also used. Expert’s consultations were also done.

Key search words: HIV, AIDS, Africa, Southern Africa, Namibia, Caprivi, Concurrent sexual relationships, gender, transactional sex, MSM, Masculinity, Culture, education, poverty, male circumcision and their combinations.

2.5.2 Inclusion Criteria

The study includes published and unpublished literature. Regional annual reports and hand searched literature. This study used the all available literature related to factors under study, which are in the English language, from Africa and prioritising the ones from Southern Africa, Namibia and Caprivi.

2.5.3 Process for reviewing articles

1. The total of the searches done using key words was **997** articles. There were **738** from Pubmed, **101** from Science Direct, **38** from Google scholar, **10** grey literature, **5** hand searched and **105** from Scopus articles.
2. The articles were reviewed for relevance by looking at titles and duplications were filtered out. Total to **102** articles.
3. At this stage abstracts were read through and those that were not referring to drivers of the HIV epidemic were excluded.
4. The articles that qualified in stage 3 grouped together according to components they are addressing e.g. concurrent sexual partnership articles put together. All together they were **78** articles used in this study.

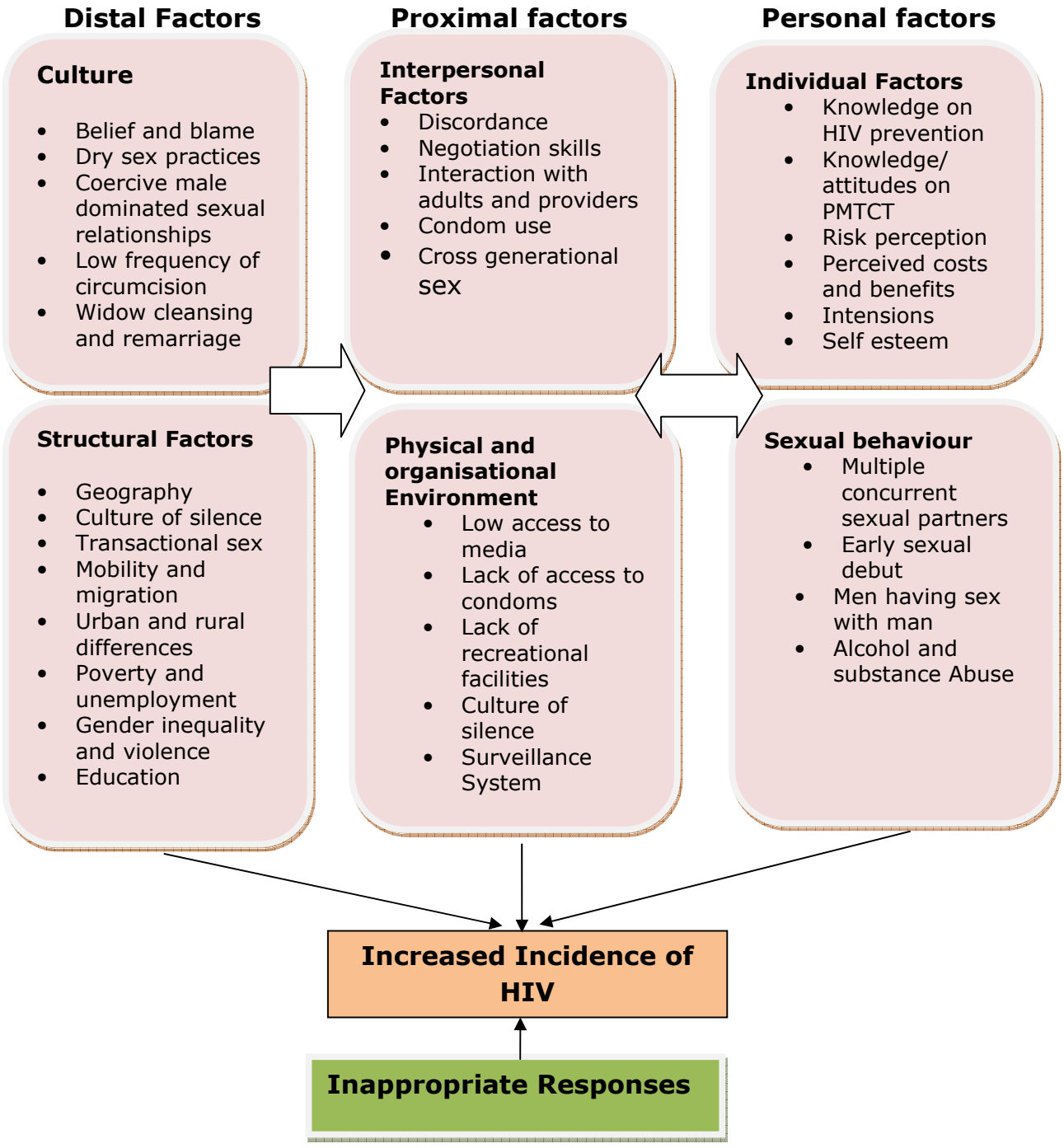
2.5.4 Table 1 Outcome of the reviewing process

Summary Table	
Database	**Results**
Pub med	738
Science direct	101
Google Scholar	38
Grey literature	10
Hand search	6
Scopus	105
Totals	**998**

CHAPTER 3: Findings

In this chapter I will discuss the framework for analysing the drivers of the epidemic and their contribution to HIV infection

3.1 Figure 1, Conceptual framework



Adapted from Eaton et al 2003

Explanation of framework

The above framework proposed by Eaton et al gives guidance on the factors related to the person as an individual and his/her sexual behaviors. Secondly, it puts interpersonal, physical and organizational environment as proximal factors. These are controlled by another person, therefore the individual cannot decide on her own. Mutual understanding and negotiations determines these factors. Distal factors are those related to culture and other structural factors like poverty. Lastly it looks into the interactions between the three levels: the personal, the proximal and the distal factors.

3.2 Analysis of the drivers of the HIV epidemic and their contribution to (HIV) infection in Caprivi.

3.2.1 Personal Factors

3.2.1.1 Individual factors

Knowledge on HIV prevention

Knowledge of HIV and AIDS in Namibia is high in both males and females with no significance difference between rural and urban residents. The SIAPAC KAP study which was conducted in 2005 found that although people had knowledge about HIV, there was no significant change in people's behavior. A significant difference was noted between women of more than secondary school education and those without education (MOHSS, 2006a). The study also found a decline in the knowledge of condoms as a prevention method for HIV by 86% in women and 92 % in men in 2000 to 84% in females and 87% in males in 2006 (MOHSS, 2006). Eighty (80) percent of teenagers who fail pregnant reported that they had no knowledge on prevention (GRN/UNFPA, 2007).

In Caprivi 97.8 percent of women and 97.3 percent of men have heard of AIDS. Although the knowledge is relatively high the behaviors don't seem to change much (MOHSS, 2006a).Misconceptions about HIV/AIDS transmission is high in Caprivi especially among women with no education and in the lowest health quintile. Knowledge of HIV transmission from mother to child and the possibility of preventing transmission by taking ART is relatively low. Females know more about mother to child transmission than their male counterparts, about 61.9 percent in female and 53.8 percent in males. Those without education show the lowest knowledge compared to educated ones. Difference between the reach and poor is not significant (MOHSS a, 2006).

Knowledge and attitudes about prevention of mother to child transmission (PMTCT) of HIV

In 2007 it is reported that Caprivi and Erongo regions had fewer antenatal women who accepted to be tested for HIV. There were only 61% of women who delivered with known HIV status in the Caprivi (MOHSS, 2007b). The NDHS reported that the percentage of men and women who know that HIV can be transmitted by breastfeeding and the risk can be minimized by the mother taking special drugs during pregnancy 53% and 61% respectively (MOHSS, 2006). Both men and women with more than secondary education had twice as high knowledge of PMTCT than those with no education. There was much difference between urban and rural dwellers. The poor had less knowledge compared to the rich 68.6% and 75.5% in women and 49% and 60.3% in men respectively (MOHSS, 2006).

Risk perception

Perception of risk depends on whether one sees the possibility of acquiring the HIV infection and is aware of the consequences of the disease (MOHSS, 2009). A household baseline survey which was conducted by NawaLife in eleven sites in Namibia indicated that 71.8 percent of the respondents considered HIV and AIDs as a serious and existing problem. About 41.2 percent perceived themselves as having no risk and 38.5 percent felt that they had very small risk. Respondents believed that HIV was in their communities but they could not believe that they can be affected. Those who tested negative also felt that they were not at risk (Murray-Johnson et al, 2005).

Although some people perceive the risk it is believed that HIV prevention is just not possible because they believe it is mentioned in the bible that towards the end of the world there will be incurable diseases (Thomas, 2008) Eaton *et al* (2003) reports that studies which were conducted by Blecher et al in 1995 found that nearly 40 percent of the people felt that they were not at risk of acquiring HIV and that only 9 percent perceived themselves to be at a serious risk.

Partners who are HIV negative in discordant couples give explanations for their discordance that showed they did not consider themselves to be at risk. Some reasons given are that they practice some form of gentle sex, their infection is hidden and they are protection by the creator, God (Bunnell, 2005).

Perceived cost and benefits

Fertility and having children is a prestige in the Caprivi region. A person who does not have children is seen as abnormal in the community and even not as respected as those who have children. The benefit of demonstrating one's fertility carries more weight than the benefit of protecting oneself from getting the virus by using condoms correctly and consistently. For most people condoms are barriers to sexual satisfaction because they prefer 'flesh to flesh' sensation and getting children (Jenniskens & Poku, 2008).

Suppression of sexual feelings is not considered desirable because the people believe that suppression of sexual feelings leads to backache for men and women alike, vaginal atrophy and psychological problems in men if they use masturbation (Eaton et al 2003).

In Caprivi there is a myth that condoms have worms which are seen when one puts warm water in the condom. Many fear that these worms have effects on their health (anecdotal).

A study conducted in South Africa on young people's sexual behaviors' reports that many young men claimed that abstaining and suppression of sexual desire leads to ill health (Eaton *et al*, 2003). Condoms are seen as decreasing pleasure and intimacy which are perceived to be more important than preventing HIV infection.

Intentions

Intention to abstain from sex until marriage is not common in Caprivi. Most people if not all will have unprotected sex and even get children before they are married. Murray- Johnson (2005) indicates that fewer people reported abstaining from sex in Andara (1.7) and Nyangana (0.7) percent compared to Oshakati (23) percent. The MOHSS (2007a) reports child bearing among teenagers in the Caprivi to beat 30% with rural teenagers being more likely higher than urban ones. The region has the lowest median age at first birth of 19.8 years compared to other regions.

Self-esteem

It is believed that one should feel self efficient in order to be able to succeed in a behavior like condom use. A review by Eaton showed that low self esteem is related to the ability of one to protect oneself from HIV (Eaton, 2003). In two South African studies, Peltzer (1999) and Reddy et al (2000) as cited by Eaton et al report that there is a relationship between self efficacies, condom use and high self reported condom use. Mbikusita-Lewanika (2009) suggested that the use of traditional herbs to dry the vagina has a relationship with a poor self-worth and less confidence in one's

self. Culturally, it is unacceptable for women to express their sexual feelings, therefore their self-esteem when it comes to sexual relations, is very low. Whatever they do, they do it for their partner. Men with low self esteem end up in multiple concurrent partnerships wanting to confirm their masculinity (Brown, 2005). Currently there is no specific information on masculinity for the region but what has been found in other regions is similar. It is uncommon to find a man who has only one woman.

A rise in self reported STIs

There has been a notable increase in the number of self reported STIs from 4371 to 4965 in 2007 and 2008 respectively. Genital ulcers accounted for 26 percent of all sexually transmitted illnesses (MOHSS, 2008b).Ulceration and availability of CD4 cells and macrophages in the area of infection makes it easy for the Virus to inter the blood stream of the other partner (Whiteside, 2008).

The result of the microbiological study by David Lewis as reported by the STI National Program Manager, Sarah Tobias indicated that 50 percent of the ulcers could not be attributed to any aetiological cause while 49 and 2.5 percent were due to Herpes Simplex Virus type 2 and syphilis respectively (Tobias, 2007).In this study the HIV/STI co-infection was highest in genital ulcer disease by 53 percent, 36 percent in urethral discharge syndrome while vaginal discharge syndrome was 29 percent.

3.2.1.2 Sexual behaviours

Behaviors for prevention are the consistent and correct use of condoms, being faithful, sticking to one sexual partner whose HIV sero status one knows, abstinence and delaying sexual debut in young people (UNAIDS, 2008).

Multiple Concurrent sexual partnerships

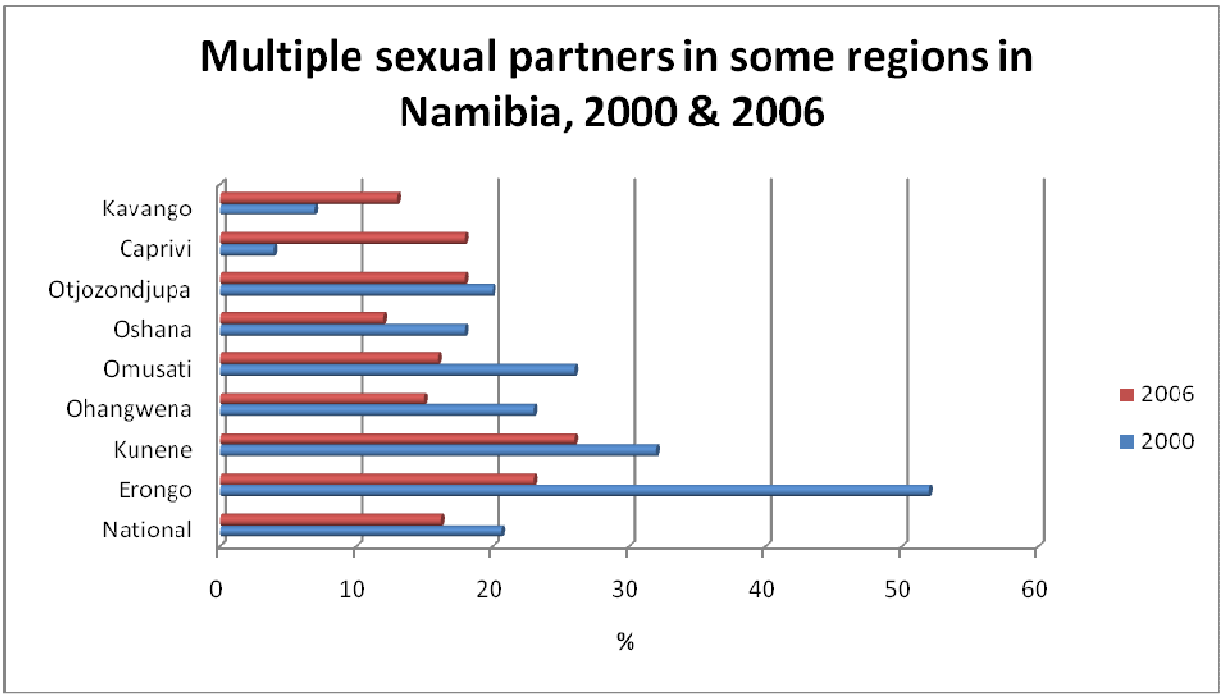
Epstein (2008) and Shelton (2007) have pointed out, the most important factor for the high HIV prevalence in many parts of Africa is multiple, concurrent sexual relationships.

As mentioned earlier, polygamy is common in the Caprivi region. It is culturally acceptable to an extent that a man can have two wives under one roof. This practice is uncommon in other regions in Namibia. UNAIDS defines concurrency as "overlapping sexual partnership where sexual intercourse with one partner occurs between two acts of intercourse with another partner" (UNAIDS, 2008).

While there is no known study conducted yet in the Caprivi on concurrent partnerships. Multiple partnerships have been documented. The 2006 NDHS reports that men are more likely to have more than two partners in a year's time than women (17.5 percent to 0.4 percent). In the category that has more than two partners in a year's time, there is no difference between the educated and those without education. Women and men who are rich and those who are educated are both likely to have more than two partners in a year compared to those with no education and those in the lowest wealth quintile (MOHSS, 2006).

The secondary analysis of data on multiple partnerships has indicated that the average number of partners in the Caprivi and Kavango region has increased in the period 2000 to 2006, with the Caprivi having the highest increase (Jenniskens and Poku, 2008). Graph below shows the partner increase in Namibia in selected regions in 2000 and 2006 (MOHSS, 2009).

Graph 2



SOURCE: MOHSS, 2009

Studies conducted in Cote D'voire, Kenya, Lesotho, Tanzania and Zambia have shown that where multiple sexual partnerships are practised, the possibility of concurrency cannot be ruled out compared to where serial monogamy is practiced. If one person happens to get infected in a sexual network where concurrency is practised, the infection will spread very fast

(Cohen, 2004).Halperin and Epstein (2004) indicated that in Africa concurrent partnership overlap for months and even years in both sexes. It may even be for life in cases where there are children born in these relationships. "Father/Mother of my child" is the saying. This is different from other places where they have more life partners but practising serial monogamy (Halperin and Epstein, 2004).

Early sexual debut

The number of sexual partners one has in life is linked to the likelihood of one getting infected especially if these relationships run concurrently (Epstein, 2007). A person who starts having sex at an early age is likely to have more life partners. In Caprivi, 3 out of 4 of the young men and 1 out of 5 young women report having their first sexual encounter at the age of 15, the lowest age compared to other regions in the country. It is reported that young people aged between 15 to 24 years are already having more than 5 sex partners which is twice as high as the national average (MOHSS, 2006a).

Premarital abstinence is very low, accounting for 22 percent of women and 14 percent of men. Anecdotal evidence shows that more than half of the marriages that take place in Caprivi happen after the first or second born child. Young women's vaginal lining are not mature enough to sustain sex. They may tear especially during abusive sexual acts. This makes them more susceptible to HIV infection compared to older women (Whiteside, 2008)

Men who have sex with men

Homosexual relationships are illegal in Namibia. They are arrested if found practicing it. If the homosexual is none Namibian, they are immediately deported to their country of origin (Whiteside, 2008). Criminalization of the practice does not mean that the practice is not taking place. It is difficult to get HIV epidemiological data from men who have sex with men because they are hidden. In most cases these men have concurrent sexual relationships with both sexes which make this group a high risk group because of bridging (Baral, 2007). Stefan et al (2009) concluded that MSM exists in Malawi, Namibia and Botswana. Gays and lesbians are accused of being responsible for the AIDS epidemic in Namibia. In places where homosexuality is practiced most, like prisons condoms are not allowed. In a South African study it was found that young men in prisons are raped or they themselves rape others to avoid being raped. This makes them more vulnerable to HIV (Eaton, 2003).

The Minister of Immigration and Home affairs denounced in August 2005 that guys and lesbians have no human right. Young people who practice

homosexuality in Katutura felt that they are being stigmatized because they cannot have sex they way they want (Lorway, 2006).

Jenniskens and Poku (2008) cited the study which was conducted by the rainbow project, a sexual health and rights project in saying that 15 percent of the 200 MSMs who were tested for HIV were found to be positive.

Alcohol and substance abuse

Having sex while one is drunk contribute to risk behaviors as one's judgment is impaired. In Caprivi, 7.1 percent of men aged 15-24 are more likely to have sexual intercourse while drunk, which is the fourth highest in the country (MOHSS, 2006).It is reported by the MOHSS (2009) that those who are above 25 years of age in caprivi consume a lot of alcohol. Substance abuse increases the likelihood of irresponsive sexual behavior (Mameja and Baatsen, 2008). Murray-Johnson reports that most respondents' behavior was not affected by alcohol consumption. Those who reported not becoming sexually aggressive were 76 percent and those who were able to say no to sex were 77.9 percent.

3.2.2 Proximal factors

3.2.2.1 Interpersonal factors

Negotiation Skills

Safer sex practices depend much on communication and mutual understanding between the two partners involved in the sexual act. In most cases people have sex without discussing how they are going to do it. Such discussions are avoided thinking that that's the way to show trust. Discussing about safer sex is only considered appropriate when one suspects the partner to be cheating or when the partner has STIs.

Reddy et al (2000) as cited by Eaton et al (2003) indicates that there is a relationship between discussing about HIV and condoms with willingness to use condom and self reported condom use. Luke (2005) indicates that condom negotiation is difficult in situations where there is an age and economic difference between sexual partners. It is difficult to introduce condoms in long term relationships because of the status quo and fear of showing mistrust. Maharaj (2001) states that couples are freer to discuss other sexual issues like family planning methods than they are with condoms. The study in Zimbabwe indicated that men aged between 27 and 39 are more likely to discuss sexual satisfaction with their sexual partners than men in the other age groups (Olanyika, 2000).

Interaction with adults and providers

Talking to children and young people about sexual matters is traditionally unacceptable in the Caprivi, a taboo. During our parents time they used to wait until one reaches puberty. The uncles and grandfathers would talk to boys while the aunties and grandmothers would talk to the girls. This timing was possible when families stayed in the villages for the rest of their lives. These days it is not possible because families are no more staying in the villages but they are scattered at their places of work.

In the absence of these who used to give the sexual education in the past, parents are still quiet about sexual matters. Young children who ask where the babies are coming from are told that, they are bought from the maternity wards in the hospital (anecdotal). As late as 2007, 18.3 percent of women and 11.4 percent of men did not support that children aged between 12 and 14 years old should be taught about using condoms to avoid AIDS (MOHSS, 2006). The average age of first sexual encounter is 15 years.

Parents are against young people having sexual relationships, but they are not guided as what to do when they get sexual feelings. A review by Eaton (2003) and others indicated that because of poor communication, young people end up having unsafe sex, trying to do it quickly before their parents arrive. In such cases there is no time to get condoms. As they are not expected to have sex, they are also not free to go for condoms or contraceptives. They fear being identified and labelled as one who is practising the forbidden act. Anecdotal evidence states that some young women are practising anal sex in order to prevent unwanted pregnancies and remain virgins until marriage. This practice makes them more susceptible to HIV infection.

Young people and single women state that, health workers in the health facilities are not treating them well. They complain that the services lack privacy, confidentiality and that they are sometimes scolded and mocked at when they collect condoms (Mac Phil et al, 2000).

Cross generational sex

In Namibia the prevalence rate of HIV is higher in older women than in young ones. In 2004, 2006 and 2008 it was 15.2 and 23.9 percent, 14.2 and 26.5 percent and 10.6 and 24.7 percent respectively (MOHSS, 2008a). The NDHS reports that the poor and those without education are more likely to have sexual relationships with older men.

Luke (2005) looked at the relationship between age difference in partners and the spread of HIV in Kisumu, Kenya and concluded that there is a relationship between age difference and not using condoms.

Women who are more than ten years younger than their partners are less likely to suggest condoms to their partners (Langen, 2005). The proxy used in the NDHS suggests the possibility of early infection as young married women are six times more likely to have partners who are ten years older than them compared to single women (MOHSS, 2006).Gregson (2002) concluded that the prevalence of HIV-1 increases faster in young women than in men in Sub Saharan Africa due to variation in age of most male partners who may be already infected.

Discordance

Discussing about HIV matters at the initiation of a sexual relationship is very important. Knowing each other's HIV status before the first sexual encounter is vital. Ignoring such preparations may end up discordant relationships which may later lead to the negative partner getting infected.

The NDHS reports that 60.1 percent of women and 80.5 percent of men

were never tested in the Caprivi. These might be living in discordance and may later get infected by the positive partner. Bunnell (2005) declares that prevalence of discordance among couples in sub Saharan Africa is high and that discordant couples are risk groups like any other risk groups. The couples who do not know their HIV status are at risk too.

Guthrie states that discordant couples with HIV 1 infection are a major contributor of HIV infections in Africa. Recent data has shown that a large proportion of the new HIV 1 infections in mature epidemics occur within discordant couples (Guthrie, 2007). It is not known why the other partner remains negative and for how long the partners remain negative.

Condom use

Condom use at first sex is believed to be a motivator for an individual's future condom use (Eaton, 2003). Condom use by men at first sex in the caprivi is 30.9 percent which is the lowest in the country. The country data show that men with more than secondary education are twice more likely to use condoms at first sexual intercourse than those without education (MOHSS, 2006).

The NDHS reported that condom use in Caprivi is low, with almost 50% of sexually active women reporting using condom in casual sexual contacts. Men reported 68% only. As reported earlier there are still a lot of myths about condoms. There is strong belief that there are worms in the condoms which may cause AIDS instead of preventing it. People claim to have seen those worms as they put hot water onto the condoms as an experiment to prove the presence of these worms. There are still a lot of myths about

condoms in the region, which may be discouraging to those who want to use condoms. Some believe that the time for putting on male condoms is awkward. It is believed that condoms lower the intimacy, disturbs romance and eventually impairing pleasure. Others say that condoms can drop into the vagina and cause infertility in future (SIAPAC, 2005).

Church leaders consider the use of condoms as sin and killing children. They believe that sperms are living beings and need to survive. This is very strong information in Caprivi. The pope's comment that condoms contribute to the increase of HIV infection can be misleading not only among many Catholics but also to other believers who share the same sentiment. This statement contradicts with the scientific knowledge that condoms prevent HIV by a significant margin, (Crawley, 2009).

Literature about misconceptions in Namibia state that condoms offer no protection, impairs pleasure, do not protect from HIV infection and that they cause infertility (MOHSS, 2009).

The drying, tightening and warming of the vagina practices discourage women and men from using condoms. In South Africa it was reported that 80% of 150 women sex workers aged between 15 – 45 confirmed that their clients prefer dry hot, tight and dry sex. They feared that men would think they have just had sex with another man if the vagina is wet and would not pay them. This compromises the use of condoms (Adele, 1998).

Participants in the Zimbabwean study agreed that condoms frequently break when used in conjunction with dry agents, (Civic, 1996). Condoms may also break if a wrong lubricant is used and in most cases Vaseline is the one available. Bagnol and Mariano (2008) confirm that the practice of dry sex influences preferences for sex without condoms in Mozambique. A study conducted in Zimbabwe concluded that the acceptability of male and female condoms is reduced by the preference of hot dry and tight vagina (Runganga and Kasule, 1995). Although the unpublished study on sexual behavior of HAART and PMTCT clients in the Caprivi region did not include the effects of vaginal traditional herbs on condoms, studies from the neighboring countries have shown a strong relation between the use of vaginal herbs and low condom use.

Only 50.3 percent of the unmarried women had used condoms during their last sexual intercourse, the lowest of all the thirteen regions. There was a relatively low condom use in men aged 15 – 24 years who were involved in high risk sexual intercourse (MOHSS, 2006a).

3.2.2.2 Physical and Organisational Environment Factors

Lack of access to condoms

Health facilities are the only places where free condoms can be accessed. In the hospital they are available in departments like Out Patients, casualty and receptions of different departments. Those who have courage to ask do ask and they are given. It is not everyone who can ask for condoms in public. Social marketing association is also making condoms available through shops and to individuals who can afford to buy them.

Although condoms are available at all health facilities, some villages are more than five to ten kilometres away from health facilities and have no shops. Workplaces, schools and other places that need to store condoms depend on the MOHSS for condoms. It is not recorded how often they run out of condoms but there are times that workplaces, schools and colleges stay without condoms.

Up till now it is still debated whether to avail condoms in school toilets and libraries. There are very few government ministries with functional workplace programs in place to be able to avail condoms in workplaces.

MOHSS has made available large quantities of free "SMILE" condoms through global fund support. The COMBI program ensures that they have to be accessibility thereof.

Lack of recreational facilities

Caprivi has very few places for recreation. Most of the so called recreation places are bars where people drink and when they get drunk they may forget to use condoms. Real recreation like movies, cruise on the river or athletics, soccer and netball are scarce. Studies have shown that in areas where recreation lacks, people tend to use sex as entertainment (Kelly *et al*, 2000).

Low access to media

The newspaper the television and the radio are three ways of passing information from one person to another. In Caprivi newspapers were not accessible up till 2008 but still only the previous day's paper due to distance from the region to the capital city were news papers are printed. It could be accessed on line but very few people had access to internet facilities. Television stated around 1990. Radio was there but only with those who could afford to buy one. There is less access to media in rural areas and dependency on outsiders who are better informed about HIV and AIDS (Eaton, 2003).

The NDHS reports that only less than 35 percent could read a newspaper and watch television once a week and slightly below 75 Percent could listen to the radio by 2007. Poor people had less access compared to wealth ones and urban residents had more access than rural residents. Caprivi is the second lowest region to Kavango in accessing media.

The local radio has HIV programs twice a week, Tuesday at 12h00 and Wednesday at 18h00.The television and newspaper HIV information is in English therefore a relatively high number of people without education do not speak or understand English.

HIV Surveillance System

The HIV surveillance system in Namibia is limited in the following ways: - (MOHSS, 2008a)

- It is only conducted in pregnant women aged 15-49.
- Men, women below 15 and above 49 and groups most at risk are left out.
- The sample is not randomised making it difficult to infer the results to the general population.
- The survey only measures prevalence, no incidence.
- No leakage between biological and behavioural data, therefore fail to explain the drivers of the epidemic.
- During flooding seasons some areas cannot be accessed

3.2.3 Distal Factors

3.2.3.1 Culture

Beliefs and blame

Most people, in the Caprivi Region believe in witchcraft and traditional diseases. Every illness and every death is given a traditional diagnosis. Health seeking behaviour is influenced by what the people believe in and when or where to go for treatment is influenced by what the people believe in. Studies which were conducted in Caprivi region have shown that illnesses especially HIV is blamed on witchcraft to cause misfortune and illnesses like "kahomo and tobolo ya kaliloze" which have the same signs and symptoms like HIV and AIDS (Thomas F, 2008).

People feel more comfortable if they are said to be bewitched than to be diagnosed with HIV and AIDS because of the stigma and blame attached to HIV. The belief in witchcraft is not confined to rural or uneducated groups but also common in the town of Katima Mulilo in people who are educated and working for the government and NGOs (Thomas, 2008).

Not long ago the traditional authorities which are the highest authority in the communities were still blaming and charging some community members who were accused by witchdoctors for bewitching and causing a disease or misfortunes like car accidents or drowning on other community members. These are done by calling two or more witchdoctors to one place and ask them to diagnose the cause of the illness or misfortune. If both diagnoses are the same, then the accused person is charged and even chased out of the village.

Culture of Silence

Counselling and testing was very low in the Caprivi (MOHSS, 2006) although it is improving with the availability of HIV treatment. Even when one was pre-test counselled and tested; only few came for their post-test counselling and results (MOHSS, 2006). Those who were ever tested are below 40 percent with only 20 percent of men. The reasons given are fear of testing positive. This makes disclosure difficult because the insurance would not pay the benefits if one died from an AIDS related illness (Thomas, 2008).

When people do not disclose they continue infecting others who could have insisted safe sex if they knew their partners' HIV status. As family members are not told when their relative has AIDS, they in most cases feel that the hospital has failed and that it is the right time to consult the witch doctors who could tell the family members what is wrong with the patient Thomas, 2007a).

Even when the family members were informed they choose to keep quite in fear of stigma and discrimination and loosing life insurance benefits. The hospital got request time and again to change the diagnosis if it was indicating AIDS. This brought about terrible under reporting and delay in the initiation of ARVs in a region (MOHSS, 2007a).

Dry sex practice

Dry sexual practice is common in the caprivi region. A study conducted in the region on sexual behaviours among ART clients indicated that 96 percent of women have used 'muti' (traditional herbs) for drying and tightening the vagina. Drying and tightening of the vagina has been suggested as a risk factor that can make women susceptible to HIV infection (Myer et al, 2005).

Bond's study in Zambia, Diane's study in Zimbabwe, Scorgie *et al* in South Africa and Bagnol's study in Mozambique have shown evidence of the presence of dry sex practice. The dry sex practice is mostly preferred by older men, the study conducted by Olanyika and others, the odds ratio was 2.23 and the 95 percent confidence interval of 1.19-4.18 which is statistically significant (Olanyika et al, 2000). Heterosexual intercourse accounts for 80% of HIV transmission in Sub- Saharan Africa. This is attributed to unsafe sexual practises such as dry sex. This practice makes the vagina is dry, causing abrasions during sexual intercourse and creating easier passage for the HIV (Bond, 1992

A study done in Zambia examined the prevalence of the practice and the profile of the women who practice dry sex. It was statistically significant ($P<0.001$) that women who are older, married, with no formal or very little education, in low socio-economic status with lower paid type of work were most likely to use traditional herbs, with the p value of <0.001. It was also significant in those who live in rural areas ($P<0.006$).

A systemic review by Myer et al (2005) indicated that there is no clear association between dry sex practices and HIV infection but suggested that bacterial vaginosis may be a mediator of the association.

Coercive male dominated sexual relationships

Traditional, social and religion norms put men as heads of families in order to provide love and protect their children and wives. Gender based violence, rape and domestic violence is some of the social challenges faced by the social services in the region (MOHSS, 2008c)

Some men in Namibia believe that being a real man is having many women and (Brown, 2005). Those who have fewer children with one wife are looked upon as fearing women, poor and weak. Brown reports that a party was held for one man in Omusati region, northern part of Namibia when His hundredth child was born. There is a belief that men are supposed to show their superiority to women by having sex (Brown, 2005). There is no information available for Caprivi we assume that there are similarities.

Not more than five years ago, women in the caprivi who decided to divorce their husbands customary, were charged heavily by the traditional authorities even when their reason for divorce was genuine. Women were forced to stay in multiple concurrent sexual partnerships because they could not afford to pay the charges for divorcing. Others feared violence and even rejection from the family as families were not allowed to accept them home without divorce letters by traditional laws. Divorced women were seen as failures. It was extremely difficult for a woman to divorce but very easy for a

man. Although some women still marry under customary law, most prefer official through the courts or church.

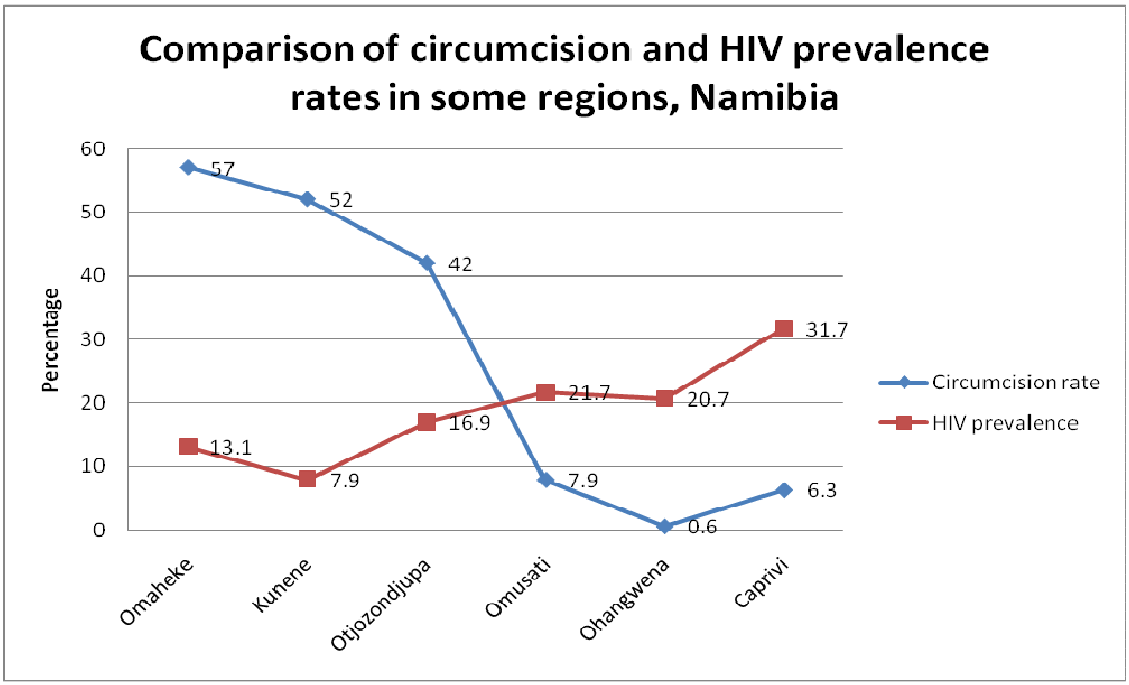
As men are encouraged by social norms to be oppressive, women are supposed to be obedient to their husbands and even boyfriends. Sex education during the first menstruation and kitchen party ceremonies undermines efforts to HIV prevention as girls are taught not to say no to sex amid the situation (Bond, 1992).HIV prevention is not discussed in these ceremonies. Although these practices are becoming less common, those who see the advantage in them are still sticking to them.

Low frequency of male circumcision

Siegfried (2009) defines male circumcision as 'the surgical removal of all or part of the foreskin of the penis and may be practiced as part of a religious ritual, as a medical procedure or as part of a traditional ritual performed as an initiation into manhood. Male circumcision was approved by WHO and UNAIDS by 2007. It is estimated that the countries in southern and eastern Africa with the circumcision rate below 29 percent have the highest HIV rates (WHO, 2007) Countries reported their experiences in scaling up circumcision and their way forward at the implementers meeting held in Windhoek, Namibia. The demand for circumcision is high; the draft policy was submitted to parliament.

Circumcision is not a common practice in the Caprivi. There were only 6 percent of circumcised men in 2006, the second lowest to Ohangwena. The percentage of those circumcised in the youth aged 15-24 is lower than 1 percent. The HIV prevalence rate in the ANC attendees have always shown lower prevalence in regions that circumcision practice is more compared to the regions with less circumcision.

Graph 3. The purposely selected 3 regions with high circumcision and 3 with low circumcision



Source: MOHSS, 2006 and MOHSS, 2008a

The outcome of the review that was conducted in Kenya, South Africa and Uganda indicated that male medical circumcision reduces the acquisition of HIV by heterosexual men by 38 to 66 percent. The incidence risk ratio at 95 percent confidence interval was 0.34 to 0.62, which is protective (Siegfried, 2009).

Another review that was conducted for Sub Sahara Africa studies by Weiss showed that there is a protective effect between circumcision and acquiring HIV (Weiss *et al*, 2000)

Widow cleansing and remarriage

Up until 1980's, there was still a very strong belief that when a man dies, his brother should take over the wife and children. He would marry the widow and bring up the children and even continue to make more children if need be (Thomas 2008b). With the advent of HIV and discouragement from churches this practice is diminishing. The strong belief that those who die are be witchcraft makes people feel free taking the widow for marriage without thinking about the possibility of her being infected.

The introduction of marriage equality law in Namibia which gives the right to women to inherit their husbands' properties has improved this practice because women who are aware of the law will not accept to be cleansed just to retain what are belonging to them by law. The Communal Land Reform Act of 2002 allows widows to inherit their husbands' land but the reinforcement thereof is weak, as some family members are still not adhering to this law, (Thomas 2008b).

Traditionally, in the Caprivi region, if the husband dies, the wife is not expected to be seen in public regularly. She puts on black clothes for a period of almost one year. If the family of the husband is satisfied that the widow behaved well, then '*mayolo'* (widow cleansing, memorial and inheritance ceremony) will be organized. The poorest and most vulnerable widows remarried without considering the risk of HIV infection, (Thomas, 2008b).

Poverty is also worsened by the culture of dispossession. When a man dies it is common for the relatives to dispossess the properties of that family leaving the woman and her children without support. Among the women who were widowed in Caprivi 33.1 were denied inheritance of their properties. Women will do anything for survival of their children which may lead them to be vulnerable to HIV infection. Dispossessions seem to be more in the ones with no education and those in the lowest wealth quintiles (MOHSS, 2006).

3.2.3.2 Structural Factors

Geography

As mentioned earlier Caprivi is bordering with Zambia, Botswana, Zimbabwe and Angola. The main road from other Southern Africa countries passes through the town of Katima Mulilo to Zambia through the Zambia – Namibia bridge northern side of the town. It branches to the east through the Ngoma border post to Botswana. Considering the high HIV prevalence in the neighbouring towns of Kasane (Botswana), Livingstone (Zambia) and Victoria falls (Zimbabwe), Katima Mulilo shares the same situation. The migrant workers, merchants and truckers pass through the Katima Mulilo town, overnight and socialise. The borders close at 18h00 and only open the following morning at 06h00. This creates a favourable environment for commercial sex industry.

Natural disasters such as floods are common in the region, forcing communities in flooding areas to stay in camps for 4 to 5 months. Schuckmansburg, Kabbe and Lusese areas are used as camping sites. Access to basic needs in these camps is not easy as people relay on food handouts from the Regional Emergency Management Unit.

Mobility and Migration

Migration increases vulnerability because most migrants leave their spouses home to the places of work. Long distance drivers are forced to overnight on their way to their destinations. At the same time sex workers are found in places where male migrants are working. Research conducted in South Africa on migrant workers and their partners concluded that migration does play an important role in the spread of HIV-1 not only from the migrants to their partners but also from the partners to the migrants. Partners claim they need sexual, social, financial and emotional support during their partners' absence (Lurie, 2003). It is common to transfer a spouse to another area without taking into account their partner.

In areas with high migration Namibia the HIV prevalence rate is also high. This is seen in Katima Mulilo, Katutura, Oshakati, Swakopmund and Walvis Bay (MOHSS, 2009d). The prevalence rate of the receiving place can be a contributing factor to the risk of the migrant getting infected. Being in the high prevalence rate of Katima Mulilo (Namibia), Kasane (Botswana), Livingstone (Zambia) and Victoria Falls (Zimbabwe) put one at high risk compared to one in an area with lower HIV prevalence rate.

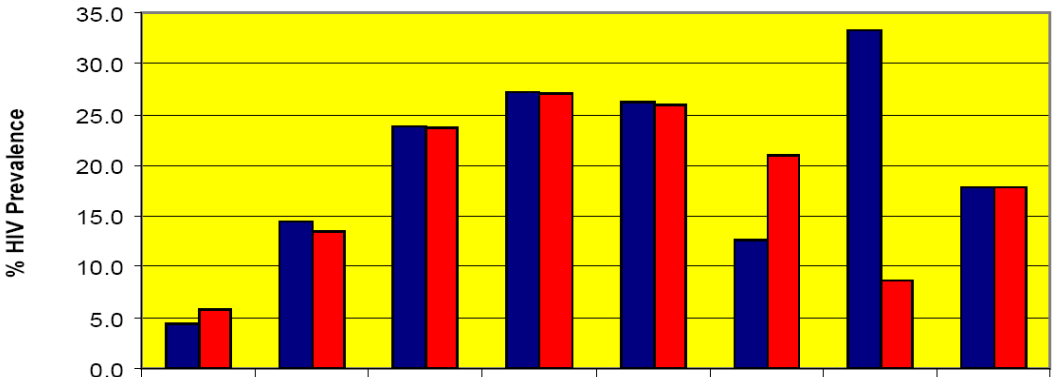
Fish is selling well in the other parts of the country therefore fishermen and the women who can afford to buy fish from the fishermen, travel to other parts of the country to sell fish. Mobility makes people vulnerable to HIV.

Urban Rural difference

National data on rural and urban HIV prevalence indicates that there is no difference in urban- rural HIV prevalence (17.8 percent). In age group 40-44, the rural dwellers are having a high prevalence of 20.9 compared to 12.6 in urban dwellers. The only age group where urban prevalence is higher than rural is 45- 49 with 8.7 and 33.3 respectively.

The graph below shows the HIV prevalence rates in age groups between rural and urban.

Graph 4. HIV prevalence rate by urban/rural residence and age group, 2008 HIV Sentinel Surveillance, Namibia



	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Total
Urban	4.4	14.5	23.9	27.3	26.2	12.6	33.3	17.8
Rural	5.8	13.5	23.7	27.1	25.9	20.9	8.7	17.8

SOURCE: MOHSS, 2008a

The review that was conducted by Eaton et al in South Africa indicates that there is a difference in knowledge about HIV between urban and rural residents. The review found no clear evidence of the difference in the number of partners between rural and urban (Eaton, 2003).

Transactional Sex

Anecdotal information in the Caprivi states that most unemployed women both in urban or rural areas depend on men for food, shelter, children support and payment of accounts and bills. Some young women get boyfriends with the motive of getting financial and material support. Available data from the northern regions of Namibia confirms this statement (Mufune, 2003).

Although sex work is considered to be taking place with migrants and mobile workers, the residents of the region are reported to be buying sex too. Percentage of those who paid for sex at the last sexual intercourse is high in Caprivi than any other region in Namibia (MOHSS, 2006). Clients of the sex workers are likely to bridge the HIV infection between the regular partners and sex workers putting them too at risk (MOHSS, 2007f). The table below shows the percentage of men aged 15-49 who reported paying for sexual intercourse in the last 12 months in Namibia.

TABLE 2. PERCENTAGE OF MEN AGED 15-49 WHO PAYED FOR SEX IN THE LAST 12 MONTHS

REGION	PERCENTAGE WHO PAYED FOR SEX
Caprivi	8%
Kavango	2%
Oshana	<2%
Omusati	2%
Kunene	4%
Erongo	1%
Khomas	1%
Hardap	<1%
Karas	2%
Omaheke	3%
Otjozondjupa	1%
Oshikoto	1%
Ohangwena	2%

SOURCE: MOHSS, 2006

Namibia is one of the fourteen countries that report fish for sex in the world (Merten, 2008). Walvis Bay is known for commercial fishing while Caprivi is known for communal fishing in the whole country. The most sold commodity on the Katima Mulilo open market is fish. Studies in other countries in Africa and have confirmed that fish are exchanged for sex. Older women in Kibaha district, Tanzania reported that even when they do not have money they can still access fish for their grandchildren by selling sex to the fishermen. Fish for sex is a new phenomenon that is found in many countries. The geographical distribution of fish for sex (Merten, 2008): Eastern Africa 49%, Southern Africa 35%, West/Central Africa 13%, Asia 3% and the rest of the world 0.0%

Social norms state that men are the ones to fish. Men usually take their nets and camp along the rivers and river streams for fishing while women would come and buy fish from them. It is uncommon to find a woman in these camps fishing together with men. There is no data available to confirm whether these small fishing industries contribute to the increase in HIV

prevalence in Caprivi. The fishing industry is believed to provide safety net for the unemployed men and women in the communities (Merten, 2008).

Poverty and Unemployment

Studies have indicated that the Caprivi region is the poorest region in Namibia. The caprivi has 48.8 percent of its residents in the lowest wealth index quintile and only 5 percent is in the highest wealth index quintile (MOHSS, 2006). Nearly above 70 percent of the population in caprivi was found to be living in the rural areas (NPC, 2004a)

Le Beau qualified HIV as a disease of poverty because of its effect of causing daily subsistence activities to take presidency over prevention of HIV infections. A choice between protecting oneself from HIV infection and the urgent daily needs is difficult during the time of HIV. A woman may choose to get money for her children's' school fees or food which is an immediate and urgent need than prevention of an illness that may come later in life (Eaton, 2003). In Caprivi only 40.4 percent of the women were employed in 2006, the lowest of all regions in Namibia. Caring for the sick is demanding especially in the poor settings where patients' basic needs cannot be met due to poverty. Families end up selling everything they have for basic needs and medical care (Thomas, 2008b). Poverty has in many cases proved to influence HIV while HIV brings and worsens poverty.

Women from a low socio-economic status are 8 times more likely to be physically abused, and 4 times more likely to encounter rape or attempted rape than women in the high socio-economic class (Whiteside, 2008).

Education

In Caprivi 16 percent of females and 8.3 percent of males have no education (NDHS, 2006). Education is said to be the key to success and opens doors to easy communication with others within and around the world. It is difficult for people without education to access information since most of the information is written and communicated in English on television. The school attendance is 95 percent at primary level and 49.6 percent at secondary level. Studies have shown that secondary education is important in HIV prevention (MOHSS, 2006), which means that almost 50 percent may not be able to prevent themselves from HIV due to lack of secondary education. The review conducted by Hargreaves et al concluded that education empowers women to negotiate safer sex and empowers them to determine who to have sex with, or when to and how to have sex the safer way.

As mentioned earlier more people live in rural area where there is less access to education compared to urban area. Older people are less likely to have education compared to young ones.

Gender inequalities and violence

Gender norms that dictate that women and girls cannot do activities like fishing and looking after cattle in the forest makes women to be depended on their male counterparts. Although much have been done by the Ministry of Gender in Namibia in promoting the already passed legislations on sexual rights, the reality at local level is still challenging in relation to HIV transmission. There are contradictions, negative reactions and misinterpretations which brings more violence between men and women. It is also anticipated that the cost of the bride payments (lobola) are making some men feel like they have bought a woman and they can do whatever they want with her (Thomas, 2007b).

As mentioned before, fishing seems to be the common source of funding in Caprivi. It is mostly done by men and boys and women can only get fish from their husbands, boyfriends or buy from the fisherman. This may lead to transactional sex as women who do not have money could sell sex for fish. As indicated earlier by Merten, (2008) that fish for sex is becoming common (Merten, 2008). Communal crop and stock farming is another source of livelihood in the whole region. Women depend on men to look after their cattle and plough for them. This may lead to sex in exchange of services and commodities.

The regional annual report indicates that gender violence is one of the social problems the social welfare office deals with almost on a daily basis in the region (MOHSS, 2008c). Rape and coercive sex can cause tears and abrasions in the vaginal wall, making it easy for the virus to penetrate the blood system (Whiteside, 2008).

Traditional norms consider wife beating as a way of disciplining wives who do not do as their husbands' wishes. High percentage of women in the Caprivi still believe that their husbands are justified in beating them if they burn the food, argue with them or refuse sexual relations. In other regions less than 50 percent of women justify wife beating while in Caprivi it is 81.3 percent (MOHSS, 2006).

One of the studies in South Africa, Soweto Town, indicated that there is a relationship between the health of the women and male dominating relationship. Women in relationships where men has considerably more power and those who are physically abused by their partners are more likely to be HIV positive and having other STIs. It also found out that such women

are not able to decide on taking VCT when offered as provider initiative because of fear of their partners (Dunkle et al, 2004).

At a consultative meeting on gender based violence organized by Women in Law and Development in Africa (WILDAF), the representative from Young Women Christian Association (YWCA) reported that HIV based divorce cases are increasing in Ndola, Zambia (Lusaka Times, 2008). The divorced women may end up in poverty and for livelihood may start selling sex.

Political instability

The region experienced political instability even after independence. The war in Angola brought about isolation of the region because it was dangerous to travel between Divundu and Kongola to the caprivi region without the army escort for a long time (anecdotal).Apart from the instability caused by neighbouring countries, the attempted secession by the rebel group from the region caused 2 232 people to flee to refugee camps in Botswana and more than a hundred were put in prisons. Prisons and refugee camps are known to having HIV rates higher than the general population (Amnesty International, 1999).

Non Namibian volunteers who were working on programs were evacuated from the region and most of the programs couldn't continue as planned. The HIV prevention and control programmes were affected as people who were supposed to support the programs could not come to the region. The other regions benefitted on important HIV programs especial useful KAP studies by NawaLife which can assist in identifying what could be fuelling the epidemic in the region.

Health Care

Access to health care in the situation of HIV is very important as it makes people get the services as soon as possible. From a long time ago in Namibia, HIV services were limited to health facilities only. Everything about HIV could only be accessed in the health facilities. Even mere information about HIV and AIDS was limited to the health facilities.

Counselling and testing services were mostly given to those who were already sick and came to health facilities to seek for treatment for their ailments. Knowing ones' HIV status while one is still asymptomatic was not common. When services are accessible people tend to use them more than when they are challenged by distance, time and cash. This was shown during the National HIV counselling and testing days that took place in Namibia for 3 days. The target was acceded from 12 000 to 34 232 (MOHSS, 2008).

During this event more people were found to be positive compared to other regions, see appendix 6 for regional results.

Lack of public transport to health facilities is common in caprivi accept for Katima Mulilo where taxis are available with a lower prices compared to outside town. Apart from distance there is also cost and time. In Caprivi most people live in rural areas and they are unemployed. The demographic and health survey reports that only 41.8 percent of women and 64.6 percent of men were employed in Caprivi.

On average, clinics are more accessible to households than hospitals in Namibia with urban residents having more access compared to rural residents. Seven out of ten can access clinics while only two out ten can access hospitals. It further reports that in caprivi 7.4 percent of households are near to hospitals while 14.9 to health facilities and 77.3 to clinics (MOHSS, 2006).

The regional annual reports shows that all along the clinics which are likely to be accessible by many were not capacitated to manage the HIV program. One needs to get a comprehensive training in order to be able to manage HIV/AIDS patients alone at a clinic. Approximately above 95 percent of the health facilities were staffed by only one person who was in most cases not having a complete training package for HIV and AIDS.

Clinics in the eastern part of Caprivi, Lisikili, Isize, Itomba, Schuckmansburg, mbalasinte and Impalila are difficult to access during 5 to 6 months of flooding which occurs every year around March to August.

CHAPTER 4 Responses for prevention

In this chapter I will identify and analyse current prevention responses, gaps and lessons learned elsewhere in the Caprivi

4.1 Present responses and gaps in the responses

Voluntary Counselling and Testing

All 27 out of 29 health facilities in the region have VCT services available. Community counsellors were trained for each clinic and 5 for the hospital and the ARV clinic. Out of 29 health facilities, 17 are having rapid testing services. The government is in the process of rolling out VCT Services to be able to provide results on the same day (MOHSS, 2007e). There is one stand alone VCT centre with 4 counsellors. One mobile VCT clinic started in 2008, which is serving the areas without VCT services (MOHSS, 2008c).

Only 17 out of 29 health facilities are able to give HIV results on the same day as it is supposed to be. The mobile VCT services cannot cover the needs of the areas without health facilities and the 17 health facilities without rapid testing services. VCT services are under utilised in the Caprivi compared to the other regions and few people go for testing, especially men. Surprisingly, during national testing days more people come for testing.

Responses for populations most at risk.

SMA is training peer educators, sells condoms to shops and also distributes the free condoms from MOHSS to truck drivers and SWs at truck stops in Katima Mulilo (own observation). They also train SW on safer sex practices like condom use. The programs for SW and their clients are mostly in town and the fishermen and their customers both in urban and rural areas are not targeted.

Hope Project

Project Hope which is also called "village health bank" provides small scale loans to young women aged 15-24. They also train them in business management and give them weekly health education sessions. The project has enrolled 382 women in caprivi. Baseline survey on behaviour and possible risks was conducted. This project is targeting structural factors related to poverty, gender, education and transactional and proximal factors like cross generational relationships (Cooper et al, 2009). Evaluation will examine weather micro loans along with risk reduction education can impact

behaviour change. Qualitative and quantitative evaluation will be ongoing. Women above 24 years are not included in the project, only 382 women enrolled and the project is operating in town, rural women are left out.

"Take Control" mass media

The "Take Control" media program started in 1999 under the leadership of the Ministry of Information and Broadcasting (MIB). ABC messages are given through radio, television, national and written messages on paper and t/shirts (MOHSS, 2007e). International, national and regional HIV and AIDS awareness days are organised by RACOC and CACOCs. Take Control's task force supports the regions during awareness days. The program mostly targets youth and the evident increase in sexual partners (MOHSS, 2007e). The impact of this program is not known although it is famous in the region. The mass media campaign and its reach and effectiveness have not been systematically evaluated yet in Caprivi.

Behavioural change responses

The Regional AIDS committee on Education is in charge of HIV activities in the MET. There are two prevention programs for students, 'My future is my Choice' at secondary level and Window of Hope at primary level (Jenniskens & Poku, 2008). The national coverage of MFMC was 50 percent in 2006 and 79 percent in 2007 Windows of hope trained 80 percent of the teachers to cover junior windows (grade 4-5) and 64 percent to cover senior windows (grade 6-7). Plans are in the pipeline to incorporate components of Windows of hope in the Life skill subject revision (MOHSS, 2007e). Those who want to attend do register for these programs and come back after formal classes to attend. During the multi sectoral Regional Support visits (RSV) for HIV and AIDS, teachers reported that although they are trained they still feel uncomfortable teaching reproductive health issues. This is likely due to cultural beliefs. They also claim to be overburdened with the extra HIV work. There is a high drop out of teacher facilitators.

CLAAHA, Community Lead Action Against HIV/ AIDS is a program initiated by Ministry of Agriculture. Communities themselves decide what HIV intervention to get involved in. Since the initiators of the program left the ministry, coordination and management of this program is insufficient.

Not all the students are covered because it is not compulsory. The youth out of school also miss out on these programs because the program is geared to those who are in schools. There is a shortage of teacher facilitators. There is lack of coordination between schools, RACE, NANASO and NYC (MOHSS, 2007a).The CLAAHA program seems to be working in isolation because of the absence and none functioning CACOCs.

Condom Promotion

Social Marketing Association is sells condom but also avails free condoms to their clients, the SW and truck drivers. The COMBI program volunteers promote and distribute 'SMILE' condoms in the region. All health facilities are also distributing condoms. The COMBI program started in 2008 in the region and is not yet reviewed.

The third medium term plan review found that youth seem to have more knowledge about condoms compared to their elders. Actual use of condoms is also not known (Jenniskens and Poku, 2008). What we do not know is to what extent does this knowledge translate into condom use, neither do we know the factors that influence decision regarding condom use and the dynamics of condom negotiation between partners (in different relationships) Consistent condom use is difficult to achieve unless these factors are understood clearly. Consistent use of condoms is low in Caprivi (MOHSS, 2006 & Cooper et al 2009)

Total Control of the Epidemic (TCE)

The project started in 2005 in other regions. In 2008 it was expanded to Caprivi with the support form CDC Namibia. The aim of the project is to mobilise individuals and communities to take control of the HIV epidemic through a face to face approach. Fifty field officers are recruited in each area (Mameja & Baatsen, 2008)

The evaluation of the program in other regions where it started in 2005 indicated that the program has contributed to the increase in uptake of VCT, ART and PMTCT but the review proposed that the program should involve men and address the drivers. Although the program is not yet evaluated, my observation is that the most of the volunteer are young people; approaching adults on sexual issue may be difficult.

Syndromic management of STI's

STI treatment is available at all health facilities. The syndromic management of STIs was introduced in 2005, since that time the program has not shown much effect. As mentioned earlier, there has been a notable increase in STIs in 2008 April to 2009 march (MOHSS, 2008c). Partner notification has been a challenge throughout these years. Etiological studies have been conducted in order to guide the development of the new guidelines.

Jenniskens and Poku (2009) reports that there has been very little progress in the STI program in Namibia as a whole.

Prevention of mother to Child transmission of HIV

In exception of the hospital, all the other health facilities are giving PMTCT services. This is given as part of the ANC services. Those who test positive at ANC are referred to the hospital for ART. Not all clients who are referred to the hospital go there, because of lack of transport money, some commitments at home and attached opportunity costs. Delivery with unknown HIV status is at 50 percent. The coordination between the ANC, ART clinic and maternity ward was still a challenge (MOHSS, 2007b). The program merely provides services, there are no targeted interventions which for educating women on how to make and promote informed choices for testing. It is also not known why most of the women in the region deliver with unknown HIV status.

Adolescent Friendly Health services

This program is run from the health facilities. Its aim is to supply all the health needs of young people. Some young people are also trained as peer educators. Not all the health workers are trained in AFHS moreover those who are trained are too busy to implement the program as it is supposed to be and very few young people attend.

4.2 Other gaps in addressing the drivers

The review of the Third Medium Term Plan on HIV/AIDS confirmed that there is a serious short fall in the existing approaches and concluded that this was the reason behind the continued rise in incidence of HIV in Caprivi. The key general conclusions of the review were that:

- Most programs were poorly coordinated
- Were centralised to urban areas
- Were gender insensitive
- Were unable to sufficiently target groups most at risk and
- No studies were undertaken to understand the core drivers of the epidemic before compiling strategic plans (MOHSS, 2007d).

The above conclusions are applicable to personal, proximal and distal factors which were identified by the review. Those that are covered are only partially covered and others are not yet evaluated like in the case of Project hope and TCE projects. Being the officer responsible for the delivery of HIV related services through the public health services, I too have experienced these problems. I agree with the findings of the review.

CHAPTER 5: DISCUSSION

Having presented the drivers of epidemic in the previous chapter, this chapter will analyze and discuss the contributing factors according to the three domains: personal, proximal and distal factors.

5.1 Personal factors

Result of the literature research showed that HIV knowledge levels are high in the caprivi and Namibia as a whole. Lack of knowledge about HIV transmission in general therefore does not seem to be a key driver. However as they are only limited studies available, it is not known how much in-depth knowledge people really have. Other studies show that there are quite a number of mis-conceptions about HIV issues. In Caprivi there is a lot of misunderstanding between HIV, witchcraft and use condoms.

Child bearing in the Caprivi region is a prestige, if mothers were well informed about the importance of knowing their HIV status and the availability of drugs to prevent babies from getting the HIV infection during labour and breastfeeding, many would accept the HIV test. If mothers would perceive the risk associated with getting an HIV positive child, and the means available to prevent it, they are more likely to take steps to protect their child.

The study found that the intentions that lead to unsafe sex are stronger than that of safe sex, however. While it is acknowledged that the immediate needs, for children, money for food and paying bills and accounts are more urgent than a disease which will come later in life, it would be best if these are done in a safer way. Getting less money because one asks for condoms, or getting divorced and live longer without consequences of HIV is better than having a short life.

Self esteem is lacking in the region as women are showing inability to negotiate for safer sex. Other studies link the use of traditional medicines for drying vagina as an indication for low self esteem. When it comes to sexual matters many women do it for men and not for themselves because men are in charge of when and how to have sex. They have a say women do not. In transactional and cross generational sex, they choose what they want as buyers.

Sexually transmitted infections are transmitted in the same way like HIV. Some studies have shown the relationship between HIV and STIS especially those that cause ulcerations. As the annual report has indicated, the numbers of STIs that cause ulcers are increasing making STI patients more susceptible to HIV. From 2005 up to date, syndromic management of STIs

has not picked up in Namibia (Jenniskens & Poku, 2008).The weakness in the program is a concern.

Although the NDHS (2006) indicates that the region has the highest increase in the number of sexual partners, this may not be seen as a driver for HIV infection as other regions are having more partners than the Caprivi region. Linking the period between 2000 and 2006, when most regions decreased the number of partners, caprivi increased and there was an increase in the HIV prevalence (43 percent in 2002). Graph 2 shows the increase in number of partners in the regions and national average.

Since we know that rapid raises and high levels of HIV are mostly due to multiple concurrent relationships rather than multiple relationships (Epistein 2007, 2008 & Shelton, 2007). As a CHPA working with HIV and a resident of Caprivi region, anecdotal information states that very few men are having one partner in a month's time. In most cases those who get children outside wedlock remain in the sexual network for a long time. There is a need for confirmation, research and addressing.

Mass media play an important role in educating communities on HIV and AIDS.As much as the Ministry of Information and broadcasting is trying to send messages through television, radio, newspapers, leaflets, posters and pamphlets, not everyone is able to get the message and apply it. Most of the campaigns are leaving out the rural areas, especially the difficult to reach. In most cases the commodities will finish before reaching the grass roots. Although sentinel survey shows that prevalence rate in both urban and rural is 17.8 percent (MOHSS, 2008a), this data is limiting as it is just conducted on pregnant women who attend ANC. It is expensive serve rural places but it will be more expensive to treat HIV when they get infected.

While Murray-Johnson's household and baseline survey in eleven sites in Namibia summarized that alcohol and substance abuse has little effect on the sexual behaviour, anecdotal evidence of young peoples' drinking behaviors is evident during high school holidays in Caprivi. The NDHS also found that the possibility of people having sex when they are drunk is high. It is feared that decision making is affected when one is drunk. There is a possibility of one not using a condom even when they are available. Murray Johnson's household baseline survey in eleven sites in Namibia summarized that alcohol and substance abuse has little effect on sexual behavior.

5.2 Proximal factors

Negotiating about sex is something that men and women in relationships do. They are reluctant to discuss condom use because it suggests lack of trust. Negotiation about sex is something that men and women in sexual

relationships, do. They are reluctant to negotiate condom use because it suggests lack of trust. The perceived cost benefit factor plays a role in whether to negotiate for a safer sex or not. If women ask for condoms they are labeled as whores and even end up being rejected. She may be ignored, overpowered and forced to have unprotected sex.

As many studies have shown that there is a relationship between HIV and other STIs, getting increases in STIs in a region with high HIV prevalence and less condom use is something to be concerned about. This could be worsened by the increase in the number of sexual partners which was observed earlier.

Literature has shown that when people have nothing to do they may end up using sex as entertainment. I fear that if this is true in the Caprivi region where young people complain that they have no coordination with the organizations which are supposed to support them when it comes to access to condoms and HIV and AIDS information (RACE) NYC for recreation and employment, vulnerability to HIV may increase.

It is clear in all the studies in Namibia and the one by UNFPA which was conducted in three regions with the COMBI program, that age of sexual initiation is lower than in the other regions. At the same time the life skill programs are not going on well due to lack of manpower and inability of the teachers to present the curriculum to students. If schools like Sikosinyana which are much closer to town report lack of Information, Education and Communication (IEC) material, then the possibility of those that are far from to be without is high (MOHSS,2007a).

Traditional ceremonies and the lessons learned during these ceremonies more not common in other regions. Studies have shown that young people are not free to access the services for prevention of HIV infection. It could be that they attend the traditional ceremonies because the Adolescent Friendly Health Services (AHFS) are not friendly.

5.3 Distal factors

The evident political instability and geographical isolation may have disadvantaged the region from getting the much needed HIV programs that continued in the other regions. Considering ones safety and given a choice as to where one should conduct a study, one will choose where you don't need army escort to travel. Household surveys and other studies which were conducted in other regions were not done in Caprivi where they were needed most.

The study on indigenous narratives brought out a lot of issues on how illnesses are understood in the Caprivi region context in relation to HIV and

AIDS, (Thomas, 2008a). Understanding HIV and AIDS is made more complicated by the stigma and discrimination attached to HIV as many people would feel comfortable to be said to be bewitched than accepting to be having AIDS (Thomas, 2009). Even though there is evidence that one has AIDS and their condition even improves on medications, they still have a tendency of moving to and fro between the traditional healers and the hospital (MOHSS, 2008c).

Ntseane and Preece (2005) declared that cultural sexual practices and beliefs should be taken into account when planning HIV and AIDS prevention programs because they have a lot to do with the local sexual networks. This study together with Thomas' study indicates how strong the belief in tradition in caprivi is. Some traditional beliefs and practices are not easy to share but there is a great need for them to be known as prevention interventions are planed.

Evidence has shown how male circumcision can prevent HIV with the three clinical trials. Not just that, but the comparison made in graph 3 shows clearly that in 3 regions, where circumcision is practiced as a traditional norm, HIV prevalence is low compared with other regions where circumcision is not common. During the national (2007) and regional (2008) male conferences it was agreed and accepted that male circumcision is a good prevention strategy but there is a needs for logistics to be put in place. The challenge of logistics and human resources might take three to five years to accomplish. Prevention is cheaper than treatment. There is a need for an interim plan on male circumcision.

Some widows decide to get married after the death of the husband. The reason why widows remain the man's family after the man's death, served as a safety net. She would retain her husband's land and other properties except that her husband's successor is still in charge. Children were brought up by their uncle/father just like their own biological children. These conditions were determined by the late man's family (Thomas, 2008b) Religion, HIV and legislation has discouraged many families from this practice. "Mayolo" still take place in some families as a memorial service and giving of the deceased name to a family member or His own child while traditional sexual cleansing is phasing out.

As indicated by the Caprivi Regional Poverty Assessment Report and the NDHS, Caprivi is poorer than other regions in Namibia and HIV and AIDS is a disease of poverty. We may argue that Tuberculosis and malaria are diseases of poverty too, but the difference is that when people are poor they cannot afford most of the commodities that can sustain them in the times of HIV. Piot et al puts AIDS as the pivot in the vicious cycle where' impacts of HIV and AIDS increase poverty and social deprivation, poverty and social deprivation increase vulnerability to HIV infection' (Piot, 2007)

5.4 Interrelation between factors

The study found that the personal, proximal and distal factors are interrelated. How one learns, perceive, and do things is influences by the type of people around and the environment. How people live and where the live influences their individual and interpersonal behaviours.

5.5 Responses for Prevention

The study found that there are good responses in place which are uniform throughout the country. More gaps were identified in the responses. Nothing is done to address issues like intergenerational sex, widow cleansing and the deeply rooted cultural norms and beliefs. Coercive sex and the break down in the traditional means of children getting information on sex related matters are also not addressed. Caprivi is mostly rural, the findings indicate that the responses are mostly in urban than in rural which indicates insufficient coverage. On top of this coordination of these programs is a big challenge.

CHAPTER 6: Conclusions and Recommendations

6.1 Conclusions

Knowing the epidemic guides in development of targeted prevention interventions. If correct interventions are well implemented they lead to achievements of the regional, national and international goals. The seven millennium development goals are some of the structural factors that can contribute to the decrease in the HIV infection if tackled properly. Ending poverty and hunger, achieving universal education, gender equality, maternal and child health and global partnership all goes together with the millennium development goal number six which is combating HIV and AIDS. Universal access to prevention may be achieved only if we target the correct contributing factors correctly.

The surveillance is the cornerstone of knowing the epidemic and guiding the responses therefore there is a greater need to make the surveillance system more informative by using the third generation surveillance system.

Indigenous narratives, cultural beliefs, misconceptions about safe sex practices, environmental and physical factors are having a greater influence on how people perceive illnesses and how they protect themselves from getting infected. When people in the Caprivi will be convinced that HIV and AIDS has no relationship with witch craft, condoms are useful in the prevention of HIV and mutual and respectful relationships between men and women are maintained, the incidence of HIV infections will decrease.

In summary, what is causing the epidemics in the region cannot yet be pinpointed at because it is complex and lacks research information to explain it. At the same time most of the responses for prevention in caprivi do not sufficiently cover the current known drivers of the epidemic.

6.2 Recommendations

6.2.1 Policy recommendations

- Surveillance system needs to include the knowledge, attitude and practice studies (KAP)
- The NDHS to include HIV testing in the survey so as to enable comparison between HIV sentinel survey and the NDHS.
- MET to consider making ‘MY Future is My Choice’ and ‘Windows of Hope’ programs compulsory and later including them into the formal curriculum.

- It is important to ensure that inheritance laws are functional and reinforcement mechanisms be put in place so as to deal with perpetuators.
- Male circumcision to be included into the current HIV prevention measure guidelines and further research required to assess the feasibility, desirability and cost effectiveness of the implementing the procedures within the local context.

6.2.2 Research recommendations

- The HIV survey to link the biological data with behavioural data and consider groups at risk like SW, their clients and MSM.
- Replicate the Nawa Life Trust HIV/AIDS community survey, the exploratory study of constructions of masculinity, sexuality and HIV/AIDS and the study on prevalence of the use of dry sex traditional medicines and the profiles of the users in the Caprivi
- There is a need for Primary data collection on the drivers of the epidemic in the region
- Available literature lack information on perceived benefits of abstinence, mutual monogamy or condom use and the explanation on the importance of both negative and positive values attached to prevention behaviour.
- Promote and organise research that identifies the most salient dimensions of differences between urban and rural communities with regard to HIV risk
- Research on transactional and cross generational relationships and migration.

6.2.3 Intervention recommendations

- Media campaigns, house to house programs to consider putting interventions that target the indigenous narratives and misleading believes in their programs.
- Inclusion of techniques and practices for local responses to HIV and AIDS to all prevention programs at all levels. Train peer educators in the techniques and practices.
- Consider bringing reproductive health programs closer to men, in bars at sports fields or workplaces.

- The lifestyle ambassadors for the condom COMBI program to pay a visit to the condom factory as part of their training in order to be empowered to respond to myths about condoms
- The Regional AIDS Coordination Committee (RACOC) and the Constituency AIDS Coordination Committees (CACOCs) to develop ways of filtering HIV messages from news papers, televisions and radio to those at most rural areas where there is no access to media
- Liaise with Ministry of Youth and Sports in particular, NYC on engaging youth in schools and those out of school in the HIV awareness program and recreation activities.
- MIB to incorporate into the regional awareness program the interventions that promote pleasure alongside safer sex messages, in order to increase the consistency use of condoms and other safe sex messages rather than those of fear and risk of disease.
- Promote interventions for delaying sexual debut, importance of fidelity and serial monogamy as part of the comprehensive prevention strategy.
- Introduce peer education in awareness and prevention programs as it is difficult to discuss sexual matters with s stranger and worst when there is age difference.

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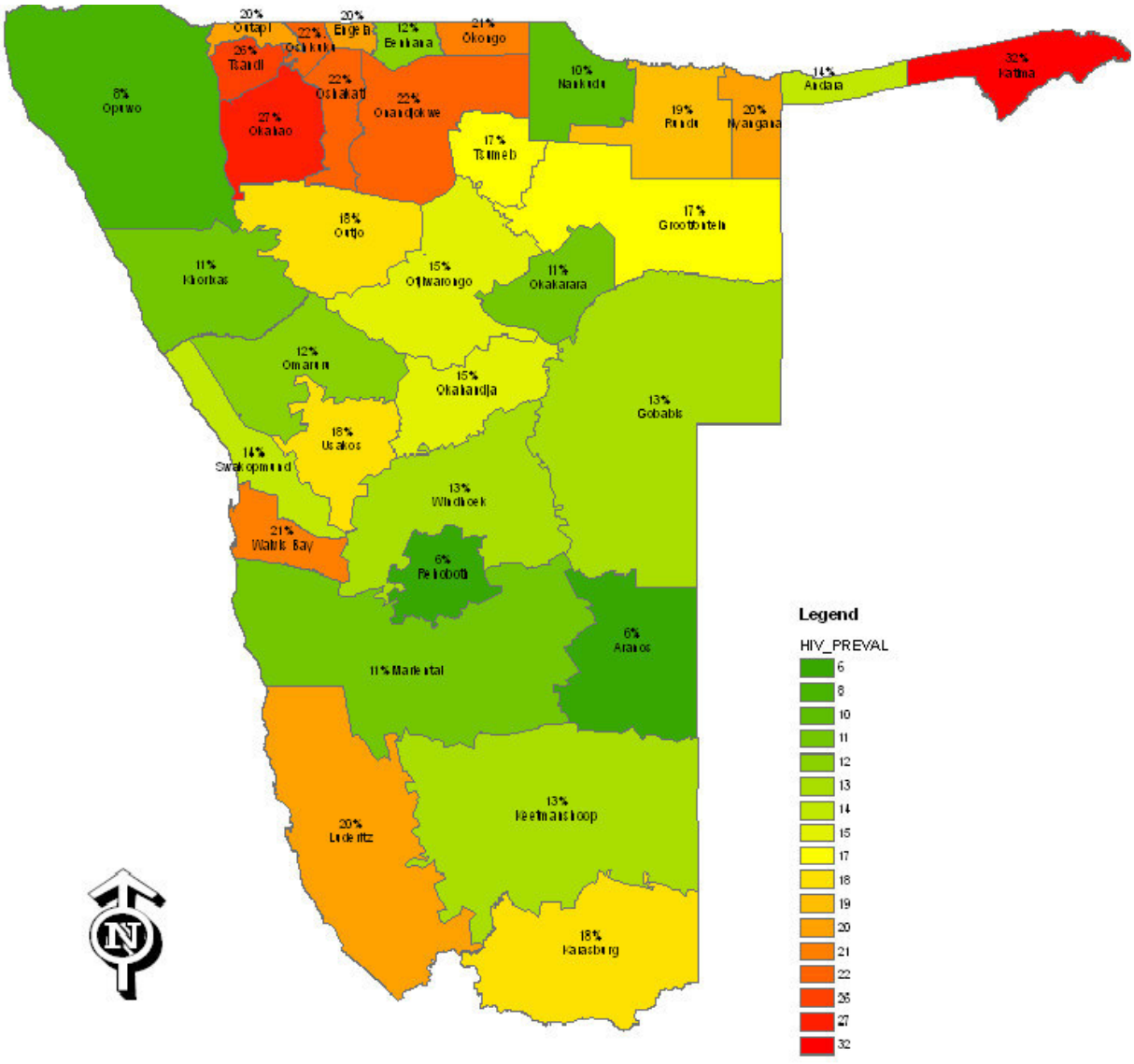
Appendices

Appendix 1: Map of the Caprivi

Source: Wikipedia

Appendix 2: Map of Namibia

HIV PREVALENCE by HEALTH DISTRICTS, 2008 SOURCE: MOHSS



Appendix 3: Wildfire Simulation Technique

Section	Content
1. Description of technique	Wildfire is a participatory exercise that stimulates the spread and some of the repercussions of HIV/AIDS. During the exercise there is a continuous discussion on participants' feelings about their own (simulated) behaviour, the impact HIV/AIDS has on their lives and those close to them, as well as exploration of the issues related to support for PLWHA and ways to stop sexual transmission.
2. Level of intervention	Any community, organisation, companies, Training
3. Stage in planning cycle	Awareness raising, mobilisation
4. Purpose and use of technique	In order to be able to work effectively within the epidemic, it is important for participants to experience what it feels like to be exposed to HIV infection personally. The simulation enables the understanding of: • The speed of transmission of HIV, the notion of sexual network and ways to stop HIV sexual transmission • What it may imply to be exposed to or infected with HIV: stigma and discrimination, emotional turmoil, need for support • Various social factors that influence help seeking behaviour for men and for women, and the need to counsel those seeking to undertake an HIV test, as well as the necessity to create a supportive environment • Why the epidemic affects everyone, not just others
5. Requirements for facilitation	Wildfire is both procedurally complex and laden with sensitive personal issues. The facilitator need to have counselling skills and ability to cope with emotions, and a non judgemental attitude. The facilitator should have attended the simulation as a participant and must review the notes thoroughly in advance.

	Consider the following variables in preparing for the exercise: whether or not participants are all males, all females or mixed; whether the participants are from the same country or from different countries or regions; the relative level of knowledge and the type of attitudes participants have about HIV epidemic; the familiarity of the participants with VCT procedures and services; the degree to which an atmosphere of openness and a willingness to share feelings has developed among participants.
6. Duration	1,5 hours
7. Materials	Space for 15-25 participants to stand in a circle, chairs for all participants. The recourse person will need 20 envelops, each containing a card. Ten of the cards should read "your result is positive "and 10 should read "your result is negative. Because of the nature of this exercise, it is critical that no observers are present, and that no one joins the exercise once it has begun
8. Methodology	**1 Explain the purpose of the simulation exercise**: simulation (not a role play) to help them experience some of the feelings associated with HIV/AIDS. Emphasize the need for confidentiality and mutual trust within the group for people to feel they can be open in the exercise. **2 Explain the procedure**: 1) Ask participants to put down anything they are holding and to stand in a circle facing inward. Approach one participant and shake the person's hand. Tell him/her and the rest of the group that for this exercise a handshake is equivalent to having unprotected sexual intercourse. 2) While still holding the participant's hand, explain that we need some Mechanism to indicate personal exposure to HIV and

	a light scratch on the palm of the hand during the handshake is the chosen method. Stress that a Scratch on the palm indicates that the person has had unprotected penetrative intercourse with someone who has had intercourse with an infected person. It does not necessarily mean that the person is infected since the virus is not transmitted during every act of unprotected intercourse. 3) Demonstrate the hand scratch to the person with whom you are shaking hands and display it to all the other participants. Stop your handshake. Tell everyone that this was only a demonstration and that no one, at this stage, has been exposed to HIV in the exercise. 4) Ask people to shake hands gently since, for many, the thought of having unprotected intercourse is difficult. **3 Select a participant to be HIV-infected.** Tell the group that you will shortly ask them all to close their eyes and that you will then walk around the circle several times during which you will touch one person on the shoulder. For the course of the exercise, the touched person will be HIV-infected. The person whose shoulder you touch is not to tell any other group member. However, he or she will scratch the palm of every person's hand shaken during the exercise. Tell the group that if, during the course of the exercise, any of them

	is scratched on the palm, that person must then scratch the palms of other people he or she shakes hands with. Remind people every time they shake hands they are having unprotected sexual intercourse. Walk around the group and lightly touch someone on the shoulder. **4 Participants experience the invisibility of infection**. After touching a single person, ask the participants to open their eyes and see if they can identify the person in the group who is HIV-infected. Bring out the point that one cannot tell if a person is infected by looking at him or her. Briefly discuss with the group how they felt as you walked around the circle. You should concentrate on facilitating the group to provide answers and information rather than giving it yourself. Bring out the point that even in a game, people are fearful of being HIV-infected and do not want to be touched. **5 Demonstration of sexual networking**. Remind participants that there is one person HIV-infected for the exercise. Tell them that as the game begins this person will scratch the palms of those with whom he or she shakes hands. Those whose palms are scratched then scratch the palms of all the hands they shake after they are scratched. Stipulate the maximum number of handshakes per participant: up to 3 hand-shakes per person for a

	group of 10 to 15 participants, and up to 4 hand-shakes per person for a group of 15 to 25. Techniques and Practices for Local Responses to HIV/AIDS 28 **Section Content** Ask everyone to participate. Step out of the circle and ask the participants to begin shaking hands with whomever they wish up to the stipulated number. **6 Demonstration of the randomness of exposure to HIV.** After the handshakes stop, step back into the centre. Ask all those who had their palms scratched during the course of the exercise and the person who had her or his shoulder touched at the beginning to step into the middle of the circle. Ask the others to return to the outer circle seats. Seat the inner circle. Encourage the group to discuss what it is like to be in either position, those on the outside first, followed by those on the inner circle. Possible questions for **outer circle**: How was your behaviour different from that of the people in the inner circle? How did you end up in the outer circle while the others are in the inner circle? How do you feel about the people in the inner circle? Possible questions for **inner circle**: What are you thinking now that you realise it is possible that you are infected? What are you feeling now that you realise it is possible that you

	are infected? Would you tell anyone you may be infected? Whom? How likely do you think it is that your confidentiality will be respected? What can be done to strengthen this? Would you tell your sexual partner or partners you might be infected? What support would you need at this stage? To whom will you turn? **Outer circle**: Will you continue having unprotected sexual intercourse? **Inner circle:** Will you continue having unprotected sexual intercourse? **Outer** **circle:** Would you have sexual intercourse again with a person in the inner circle? (If necessary, remind everyone in the inner circle that they have been exposed to the virus but it is not yet known if transmission has taken place. At some stage during the discussion, participants may ask about the possibility of an HIV antibody test. Reassure them that voluntary and confidential testing with counselling is available. **7 Knowledge of one's HIV status: voluntary/confidential testing with counselling.** Offer the test to all in the inner circle; discuss the testing procedure, and the meaning of positive and negative results. If a participant does not want to be tested, the facilitator should explore the reasons for this decision. The person could be asked: 1) You are possibly infected. Do you have all the information you require to decide what you are going to do in light of this? 2) Are you

	going to ensure that no one else is put at risk from your behaviour? 3) What support will you need to sustain your behaviour? The person should then be asked to move to the outer ring. Ask people in the outer circle what choice they would have made and why. Shuffle the test result envelopes and pass them to those in the inner circle, asking participants not to open their envelopes but to hold them. This symbolises the waiting time between taking the test and receiving the results. Questions include: 1) What does it feel like to be waiting for your result? 2) What support would you need during this period? 3) Would you tell anyone you had taken the test? Whom? 4) Would you continue with unprotected sexual intercourse? Why/why not? 5) Would you be able to concentrate fully at work and/or home? **8 Testing without consent:** Before asking those in the inner circle to open their envelopes, give envelopes to a number of the women in the outer circle telling them that they are pregnant and have been tested without their knowledge or consent. Give envelopes to a smaller number of men telling them that they were tested without their knowledge or consent while being 5 Technique: Wildfire simulation 29

	Section Content treated for TB or a sexually transmitted infection or when they joined the military. Explore how these individuals feel about being tested without their consent. Then ask all to open the envelopes. **9 Developing strategies to live with the news that one is not infected**. Ask each person his or her test result. Discuss with each person with a negative result what impact this has had on her or him: 1) How does it feel to get a negative result? 2) Are you going to change your behaviour in order to remain uninfected? 3) Do you have all the information you require about safe sex? 4) Where would you get further information? 5) What support will you need to sustain your safe behaviors? The facilitator discusses the window period for HIV antibody testing and the need for a follow-up test if people have had unprotected penetrative intercourse during the previous three months. Ask those with a negative result to replace their cards in their envelopes and to give them back to the facilitator, then ask them to join the outer circle. **10 Developing strategies to live with the news that one is HIV-infected.** Each person with a positive result is now encouraged to discuss his or her reactions. The facilitator asks questions such as: 1) Which thoughts crossed

	your mind when you received your result? 2) What is your immediate reaction to the result? 3) Will you tell people your result? 4) How do you think they will react? 5) Will you tell your spouse/partner/sexual partners? 6) Will you tell your children? 7) Will you tell your work colleagues? Employer? 8) What support do you need for all this? 9) Do you want to have children? How will this test result affect that? The positive aspects of knowing one's infection status should be discussed: the possibility of making changes to remain well, the possibility of planning for one's future and that of one's children, the prompt diagnosis and treatment of opportunistic infections. The difference between being infected and having an HIV-related illness, including AIDS, should be made clear. There should be some discussion of how to disclose infection status and the possible consequences of disclosure. When the discussion has covered all of the concerns, ask those participants who received a positive result to place their results in the envelopes. Take the envelopes back one by one reminding the participants that this has been an exercise only and as they pass the envelope to you they also "pass back the virus". When taking back the envelopes, ask each participant to stand and step out of the inner circle. Ask them how they feel and whether they need any help.

	Then ask them to move to the outer circle. **11 Developing strategies for living with the virus in our midst.** After everyone has moved to the outer circle, ask all participants to stand in a circle again. Explore with the participants some strategies for living with the virus in our midst. Questions could include: 1) How can we co-exist with this virus, live with it in our midst without becoming infected? 2) How can you help members of your family or friends to protect themselves? 3) How can you support those who are already affected? Ask each participant to reflect on the exercise and say a word or name a colour to express her or his feelings or thoughts. Emphasise that the exercise is now over. At the end, participants may feel like giving each other some kind of support: a word, a smile, a touch, and a hug, or "handshakes without scratching". A break, preferably a meal break, must be taken after this exercise to give participants time to think about the exercise and how it affected them. The exercise can affect participants profoundly, and it is important to be sensitive to this in the hours and days that follow. Participants may wish to spend time in "support" groups immediately after the exercise and this option should be offered.
9. Impact	The simulation exercise is very powerful and helps in developing a sense of personal engagement and a fuller understanding of

	the epidemic and its implications. The simulation in Senegal, Ivory Coast and Burkina Faso led to: immediate personal commitment to act and to support each other; immediate personal commitment to act in order to reduce individual, age-gender and sectoral vulnerability to the epidemic, and to anticipate its various impacts; the formulation of comprehensive workplace policies and programs taking into account the needs of PLWHA.
10 Critical issues for success	• An experienced facilitator who has gone through the exercise as a participant is an absolute necessity • All participants must treat any personal information that is shared during the course of the exercise as confidential
11 Source of technique	Africa Consultants International: Gary Engelberg, Dr Fatim L. Dia, and A. Boubacar Diallo. Tel.: +(221) 825 3637, Email: aciannex@enda.sn www.acibaobab.org Royal Tropical Institute: Dr Georges Tiendrebeogo, Tel: + (31) 20 568 8578; Email: g.tiendrebeogo@kit.nl, www.kit.nl UNDP HIV and Development Programme, New York www.undp.org/hiv/publications/facilitatorsnew.doc
12 Editor's note for learning	This exercise was developed with the support of UNDP HIV and Development Programme and has been adapted and implemented by various organisations in Africa, the Caribbean and Thailand with different audiences such as NGOs, religious organisations, UN staff, decision makers,

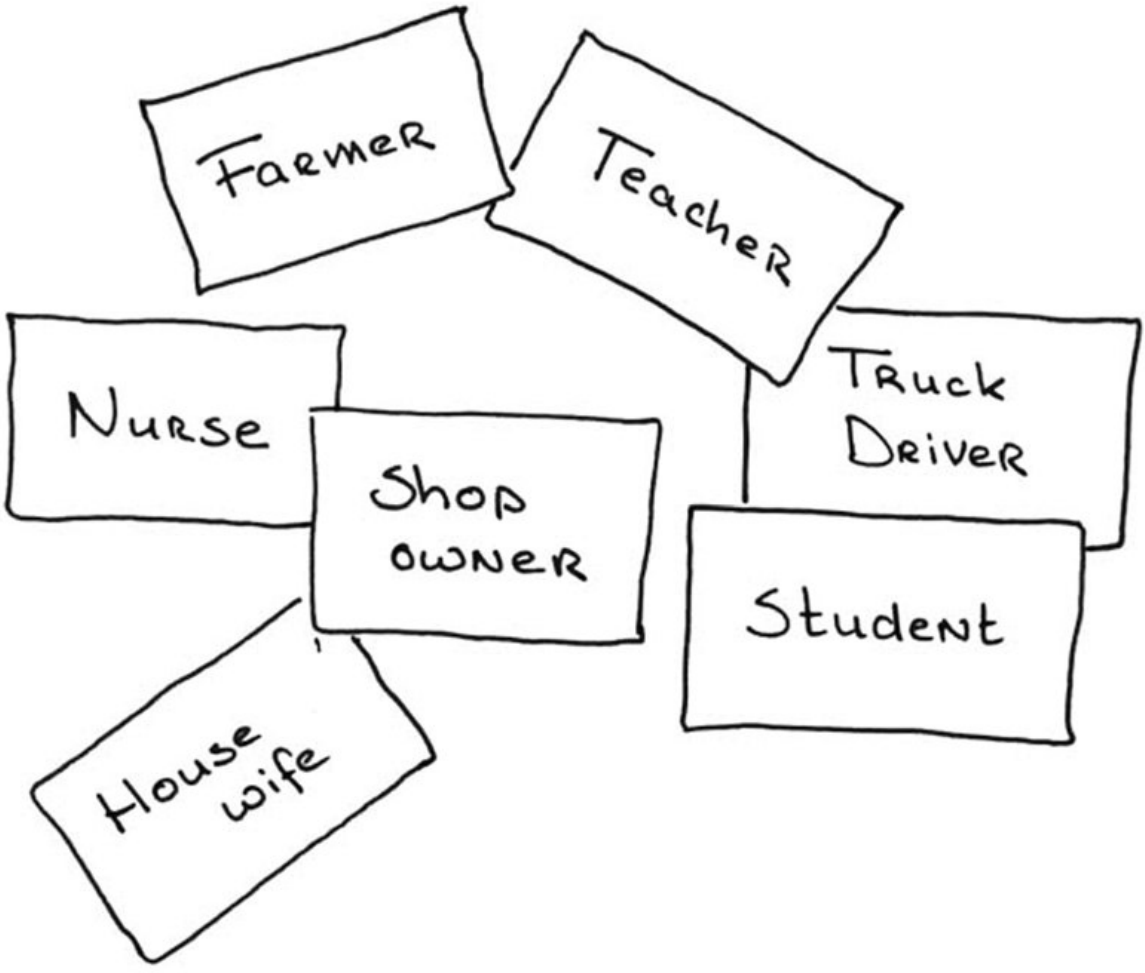
	parliamentarians, the business sector, youth and women groups, etc. Recently it was done in Malawi with a health sector NGO before the elaboration of their VCT strategy and the design of the pilot VCT centres. The most important lesson learned is the need for attitudes change and a move from the "THEM" to "US" perspective, which requires at professional and personal levels an in-depth understanding and internalisation of the issues surrounding HIV/AIDS including its emotional aspects. There are variations in the simulation, for instance the hand shaking is replaced by putting seeds of two colours in envelopes, the exchange of seeds stands for unprotected penetrative sex. In Thailand, the exchange is done by liquid in vials (some vials have a different liquid of the same colour) after the exchange of liquids a substance is added to all vials and the infected ones get a different colour. However, the discussions during the exercise are the same and lead to the same result.

Appendix 4: Occupational Risk

Section	Content
1.Description of technique	The risk of HIV/AIDS infection of people in the different occupations is discussed
2. Level of intervention	Any group (workplace, community, youth, students, peer educators, teachers, NGOs)
3. Stage or area of action(Cycle)	Awareness raising, mobilization
4. Purpose and use of technique	Raise awareness that most people are vulnerable to HIV infection Reduce levels of discrimination against groups e.g. PLWHA
5. Equipments for facilitation	The facilitator must count him/herself as person with risk and know the culture of the people. S/he must have the ability to encourage open discussion and not be judgmental.
6. Duration	1-2 hours, depending on group size
7. material required	Small cards, markers
8. Methodology	1. Ask the group to mention occupations that are common(as many occupations as they are participants) 2. Write these occupations down on cards 3. Each person gets a card with an occupation. 4. Divide the space into 2 parts, a low risk part and a high risk part 5. Each person assesses the occupation on the cards 6. Each person chooses to sit at high or low risk side of the circle 7. Discussions guided by facilitator why occupations are considered high or low risk.
9. Impact	Increased levels of awareness about risk behaviour and vulnerability of all Reduced discrimination/ stigmatization as individuals

	become more sensitive
10. Critical issues for success	Only select occupations that are familiar to the group
11. Source of technique	AIDSNet, chiangmai, Thailand aidsnetn@loxinfo.co.th JSA Consultants Ltd. P.O. Box A408, LA. Accra, Ghana, jsa@africaonline.com.gh
12. Editors note for learning	This technique can be used in many different settings. For instance in a training context, in workplace programmes etc.

Examples of occupations selected in the exercise



Appendix 5: HIV prevalence in Districts

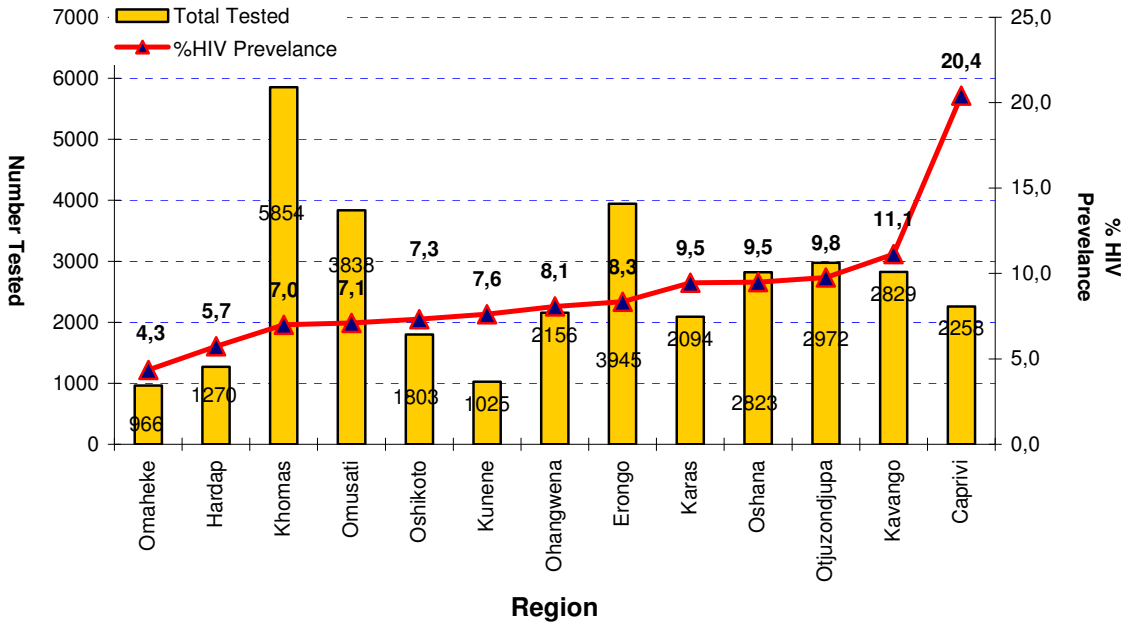
HIV prevalence trends by site and year, 1992-2008

Sentinel site	1992	1994	1996	1998	2000	2002	2004	2006	2008
Andara hospital		2	11	16	15	21	18	22.7	14.2
Aranos*									5.9
Eenhana								21.4	11.6
Engela		7	18	17	23	19	19	27	20.1
Gobabis	1			9	9	13	13	7.9	13.1
Grootfontein		9				30	28	19.3	16.9
Karasburg								22.7	18.3
Katima Mulilo	14	25	24	29	33	43	42	39.4	31.7
Katutura State Hospital	4	7	16	23	31	27	22	21.7	21.7
Keetmanshoop hospital	3	8		7	17	16	16	18.5	12.7
Khorixas*									10.9
Luderitz							22	22.5	20.1
Mariental					10	12	11	10.2	10.8
Nankudu				13	18	16	19	13.9	10.5
Nyangana Hospital		6	5	10	16	22	15	10.2	19.5
Okahandja								18.5	14.9
Okahao								22.5	27.4
Okakarara*									11.4
Okongo*									20.7
Omaruru*									12.0
Onandjokwe		8	17	21	23	28	22	23.7	21.9
Opuwo	3	1	4	6	7	9	9	7.9	7.9
Intermediate hospital Oshakati	4	14	22	34	28	30	25	27.1	22.4
Oshikuku					21	27	27	22.4	21.7

Otjiwarongo	2	9		16	18	25	17	18.7	15.2
Outapi						23	17	20.7	19.6
Outjo*									18.0
Rehoboth		3		9	9	10	14	13.9	6.3
Rundu		8	8	14	14	22	21	20.1	18.8
Swakopmund	3	7	17	15	22	16	28	17.3	14.2
Tsandi*									25.9
Tsumeb						25	16	17	17.1
Usakos*									17.8
Walvis Bay				29	28	25	26	22.1	21.4
Windhoek Central Hospital							10	9.1	4.7
Namibia (Crude)	**4.2**	**8.4**	**15.4**	**17.3**	**19.3**	**22**	**19.7**	**19.9**	**17.8**

New sites *

Appendix 6: National testing day results



Source: MOHSS, 2008b

Appendix 7: Number of public sector male and female condoms distributed to the region April 2006 – March 2007

Region	Male Condoms	Female Condom
Otjozondjupa	2,016,000	12,200
Omusati	812,160	3,000
Kunene	944,640	n/a
Oshana	6,681,600	11,000
Oshikoto	567,360	7,000
Ohangwena	100,800	n/a
Hardap	512,640	1,000
Karas	819,360	19,000
Erongo	1,126,080	11,100
Kavango	2,355,840	9,000
Caprivi	244,800	5,000
Khomas	3,286,080	13,540
Omaheke	792,000	5,000
National	4,723,200	56,000
NASOMA	-	90,000
Total	**24,982,560**	**942,840**

Source: Central Medical Stores, MOHSS